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PALESTINE EXPLORATION FUND.

Patron—THE QUEEN.

Quarterly Statement

FOR 1883.

15-16

LONDON:
SOCIETY'S OFFICE, 1, ADAM STREET, ADELPHI,
AND BY
RICHARD BENTLEY & SON, 8, NEW BURLINGTON STREET.

LONDON:
HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY,
ST. MARTIN'S LANE.

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THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

THE Old and New Testament Maps are now ready. They were issued in November, and there has already been a considerable demand for them. The responsibility of identification rests with Mr. Trelawney Saunders, the editor, to whom must also be given the credit for all the information which he has conveyed with the maps. For instance, the Old Testament Map illustrates the geography not only of the Canonical books, but also that of Josephus and the Apocrypha. The Tribal Divisions, the Twelve Governments of Solomon, the Stations of the Tabernacle and Ark, the Cities of Refuge (Priestly and Levitical), the Canaanite Capitals, Rehoboam's Fortified Places, will be found on the map. By means of different tints, also, the tribes included in the different Captivities are indicated. Mr. Saunders has also added a Key to Ezekiel's Prophetic Divisions. As regards the New Testament Map it illustrates the geography of the Talmud and Josephus as well as of the Gospels. The modern names will be found under the ancient names. The heights are given in English feet. The maps are uniform in size and appearance, and when mounted are 5 feet 4 inches long and 3 feet wide.

The price of these maps is 6s. 6d. to subscribers, carriage paid to any part of Great Britain or Ireland. This is half the price charged by the publishers to the public. It is found that the water-basins cannot be laid on them, because the maps are already fully occupied with colour used for conveying information. The sections can be had separately in sheets.

The list of identifications of all places in Western Palestine with those adopted by Mr. Saunders and those by Captain Conder is now in preparation, and will be issued as soon as possible.

The third volume of *Memoirs* has been delayed, but the final revise is now

passing through the press. The other two volumes may be expected in the spring. Captain Conder, who has returned from Egypt, and is now on sick leave, will, as soon as he has recovered his health, return to the service of the Committee, and has undertaken to prepare a paper for the Jerusalem volume, containing an account of all the researches and discoveries made there since Colonel Warren's excavations.

The great work of which these volumes form part will not be reprinted, and only a few copies are left. Particulars of the price may be obtained of the Secretary. The Committee beg their friends to secure them, if possible, for libraries, so as to make them more generally useful.

Colonel Warren is now at Suez engaged in bringing to justice the murderers of Professor Palmer and his companions. Of their fate there is now no longer room for doubt. The notice of Professor Palmer which will be found on page 4 is reprinted from the "Athenæum." A memoir of his life is being prepared by Mr. Walter Besant: it may be expected early in the year. In his most lamentable death, the Society has suffered an irreparable loss. There is no living man who can take his place, because, though many Oriental scholars may be found, there is not one who knows so well the people of the Desert and the Holy Land, their manners, customs, and language.

Work in the field will be resumed as soon as possible. Meantime, Captain Conder will, it is hoped, take up again the work in which he was interrupted, of compiling the Memoirs of the part he has already surveyed. The position of the Society has been greatly improved by the issue of these Memoirs. Its objects are now widely known, and the publication of its splendid maps and the volumes of the Memoirs are at once a proof of the excellence of their past work and a pledge for the future. It is hoped that every subscriber will take a copy of the Biblical maps, if not for his own use, for presentation to schools and libraries.

Mr. Saunders's sections of the country, viz., one from north to south, and four from east to west, have been laid down on two sheets, so that they can be had separately if desired. They are also laid down on his "Water-Basin" Map. The price of the sheets is 1s. 6d. each. The Jerusalem sheet of the great Map can also be had separately, at half-a-crown.

The income of the Society from all sources, from September 19th to December 22nd was £783 4s. 4d.

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this

method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

EDWARD HENRY PALMER.

(Reprinted, by permission of the proprietors, from the "Athenæum" of November 11th, 1882.)

THE LATE PROFESSOR PALMER.

The intelligence received at the Admiralty from Colonel Warren leaves, unhappily, no room for any further hope. Palmer and his party have been murdered. They were surrounded, captured, taken into the mountains, and then, after two or three days of captivity, they were done to death. For a long time his friends sought comfort in the gleams of hope afforded by possibilities and by conflicting rumours. There was a persistent report that two Englishmen had been killed—where, then, was the third? Alas! the third Englishman was the Sheikh Abdullah, Palmer himself, whom the murderers took for a Syrian effendi. Then it was reported that an Englishman had been seen in the Northern Desert: this Englishman might be Palmer; then it was argued that because Palmer had just gone through the desert alone and unprotected, relying on his knowledge of the people and their language, no harm would happen on a second visit. "It is impossible," said one who had witnessed his power of managing natives, "that any Arab should kill Palmer." There was also the report that he had escaped with the Sheikh Meter Abu Sofieh, and had been carried into Arabia. It is now, however, certain that he is dead; he was not betrayed by any of the Arabs whose friendship he had gained on his first journey, nor was he murdered for the money he had with him, for the murderers knew nothing of it, and the money escaped them. The authors of the crime have to be sought in Cairo, Nakhel, and El Arish. That they will be duly sought and punished we entertain no doubt. The matter has been placed in the best hands; Colonel Warren is no stranger to the wily Oriental. Meantime, the only consolation for this most terrible misfortune is the thought that no soldier ever died more bravely for his country than Palmer; that no more gallant achievement has ever been recorded in history than that first journey of his in which, alone and unprotected, he turned back the tide of fanaticism, and persuaded the countless hordes of the desert to sit down in quiet and become the friends of the Feringhee. A brief record of this journey, drawn up from day to day in letters to his wife, has arrived in England. An official report was drawn up by Palmer for Admiral Seymour, and will, perhaps, some day see the light.

Edward Henry Palmer was born at Cambridge on August 7th, 1840. His parents both died when he was quite young. He was educated at the Perse Grammar School. There was no place for him at Cambridge, while an opening seemed possible in London, probably through family interest. He therefore left Cambridge and came to town, with the view

of entering upon a mercantile career. One knows little of his London life; there can be, indeed, little to tell of a young man's early work in a City house. He learnt, however, French and Italian during these years of City life.

It was in the year 1860 that he determined to give up whatever chances he had in the City of the Golden Pavement, and returned to Cambridge, where after two or three years of study, he entered himself at St. John's, Cambridge. He spent his undergraduate time in reading a great deal of Arabic and Persian, and as little Latin and Greek as possible. A third class in the Classical Tripos marked the extent of his attainments in those languages. Indeed, he never professed at all to be a classical scholar. He took his degree in the year 1867, and it is very greatly to the credit of the Society of St. John's that they recognised his Oriental studies by electing him a Fellow in the same year. This election was, indeed, an endowment of research. The first chance of visiting the East occurred in 1869, when Captain (now Sir Charles) Wilson went out on the Sinai Survey Expedition, accompanied by Captain Palmer, R.E., the Rev. F. W. Holland, and E. H. Palmer. The business of the "pundit" was to investigate the traditions, dialects, and antiquities of the Sinai peninsula. He developed during this journey a wonderful power of quickly apprehending and acquiring dialectic differences, and took his first lessons in the art of managing the difficult tribes of Sinai. Soon after his return in 1870 he made arrangements with the Committee of the Palestine Exploration Fund for a journey of exploration in the very little known Negeb or South Country and the desert of the Tih. This he accomplished at very small expense in company with the late Mr. C. F. Tyrwhitt Drake, who was assisted by a grant made by the University from the Worts Travelling Bachelors' Fund. His report of the results of the journey was published in the *Quarterly Statement* of the Palestine Exploration Fund, and has been republished in the book of special papers belonging to the "Memoirs of the Survey of Western Palestine." He also wrote a popular account of the same expedition called "The Desert of the Exodus." In the same year, by the resignation of Mr. Theodore Preston, who had long been non-resident, the Lord Almoner's Professorship of Arabic became vacant, and was given by the late Dean of Windsor to Palmer. This preferment, although only worth 40*l.* a year, enabled him to keep his Fellowship and to marry. The stipend of the Professorship was also increased by the University to 300*l.* a year on condition of his giving lectures in Persian and Hindustani. In the year 1874 he was called to the Bar, and although he never seriously considered the law as a profession, it was one of his chief pleasures to go on circuit, to conduct an occasional case, and to study the curious phases of life presented by a county assize. I believe, however, that he showed considerable power in the exercise of advocacy.

Between 1871 and the present year the real work of his life was done. It is wonderful to consider how vast a quantity of work he got through

during these ten years. It must be remembered, too, that the work was accomplished in the face of ill health—he was always suffering from asthma—and domestic affliction caused by the long illness and death of his first wife. A revision of Henry Martyn's translation of the New Testament into Persian; an Arabic grammar; an Arabic manual; a Persian dictionary; a report on the Bedawin of Sinai; a translation into Arabic of Moor's "Paradise and the Peri"; an edition, with an English translation, of the Arab poet Beha ed Din Zohair; a translation of the Koran; a history of Jerusalem; a life of the Caliph Haroun al Raschid; the "Song of the Reed," chiefly from Arabic and Persian sources; a volume of verses in Romany, written with Miss Janet Tuckey and Mr. Charles Leland; and a translation of the Swedish poet Runeberg (with Mr. Erik Magnusson), make up together a goodly show of work in a short ten years. But besides these books he wrote occasionally for the *British Quarterly Review*—one of his papers on "The Secret Sects of Syria" was a very remarkable article—for the literary journals, for the *Saturday Review*, and for several of the monthly magazines. He translated and transliterated the long lists of names procured by Captain Conder during the survey of Western Palestine, and he was appointed joint editor, with me, of the memoirs of that great work. He was also engaged in preparing a set of manuals and grammars for Messrs. Trübner & Co. at the time when he consented to go out to the desert for the Government. It is impossible for any one to be actively connected with the Palestine Exploration Society without being forced to take an interest in the manifold topographical questions which agitate the minds of the members. Palmer, who took strongly from the beginning a view antagonistic to that of Mr. James Fergusson, contributed for his share of the controversy an account, from the Arab historians' descriptions of the building, of the much disputed Dome. Concerning his linguistic attainments, it is difficult to enumerate the languages which he had acquired, because he was continually learning new ones. Arabic, Persian, Hindustani, Urdu, are some of the Eastern tongues with which he was familiar. He knew Turkish, but not, I think, so well. As regards European languages, he knew French, German, Spanish, Greek, Italian, and Swedish, with its cousins of Denmark, Norway, and Iceland. He knew some Polish and some Russian, but I do not know how far he could be called a master of these languages. He could talk Romany as well as any gipsy on the road. It is a curious fact that he once came across Romany-speaking gipsies in Moab. A striking illustration of his facility and mastery of language occurs to me. We were going together to visit the Foreign Sailors' Home at Limehouse. In the road, just before we arrived at that institution, he espied a friend in charge of a cart filled with baskets—one Stanley or Smith—with whom he exchanged five minutes of question and greeting in Romany. On the steps of the Home were two men basking in the sun: one of these was a Lascar from Calcutta, the other a burly negro who hailed from the Soudan, and talked some kind of Arabic. In the conversation which followed, both men

having a budget of grievances to unfold, it was evidently little or no effort for Palmer to pass from Arabic to Hindustani and back again, turning from one to the other while both talked at once. It is not uncommon to find scholars who have so far mastered languages as to be able to read the literature of many tongues with ease and pleasure, but it is rare indeed to find a man who can speak with equal ease in all or any of the languages he has studied. Palmer was by no means a mere man of books ; there was nothing in his ordinary speech, except his extraordinary flow of anecdote, to show that he was a scholar at all. He was a man of small stature, quiet manners, and gentle voice. Yet he was a man who at once impressed every one with whom he came in contact. Perhaps it would not be too much to assert that he had no business or private relations with any man who did not straightway become his friend. Therefore, because he was concerned in many things, he was a man of many friends. It is beyond any power of words to express the loss which those who enjoyed his intimate friendship have suffered by his untimely death.

Another thing : this rare linguist, this extraordinary scholar, possessed to a remarkable degree that power which enables men to become conjurers, thought-readers, so-called spiritualistic mediums. The science of legerdemain had no mysteries for him ; he could cheat the senses so that you saw, and steadfastly maintained that you saw, the thing which was not. No doubt the possession of this extraordinary sympathetic faculty stood him in the greatest stead in dealing with the Arabs of the desert. No one else, in fact, could do with these wild people what he could do. He had many methods : he laughed with them or at them ; he refused to be moved by their threats ; he ordered them ; he assumed that they were going to do what he wanted ; if necessary he cursed them.

Again, he was an excellent actor : he could "render" a scene with the greatest fidelity and skill, he could multiply himself and personate alone a play with many characters, he could represent to the very life any man he chose to study. And latterly he developed a new power, that of drawing caricature portraits. There exists at his house a portfolio of water-colour drawings in which the features of many friends are depicted with the most good-natured and truthful satire. Another remarkable thing was that although he read very little English literature, and professed to be entirely ignorant of English poetry, he wrote verse with great ease and fluency, both translations and original verse. I hope that when his papers are examined there will be found the materials for giving a glimpse of this side of a many-sided man.

These few words are weak and feeble indeed. Had the man been of lesser power, of lower nature, I could doubtless have spoken more firmly. One wonders whether he ever knew or suspected in the least how great and rare a man he was—how much his friends respected him, and with what bitter hearts they would mourn his loss.

WALTER BESANT.

OBSERVATIONS ON THE CLIMATE OF JERUSALEM.

By THOMAS CHAPLIN, M.D.

RAIN.

THE following report on the rainfall at Jerusalem embodies the results of a series of observations made during twenty-two years, namely, from 1860-1 to 1881-2.

The instruments employed for measuring the rain have been of two kinds : (1) the old-fashioned float-gauge of Newman, and (2) Glaisher's gauge, as supplied by Negretti & Zambra. The chief disadvantage of the former instrument is that, in consequence of the float displacing by its weight a portion of the water in the cylinder, the reading is usually too low, or no indication at all may be given, when the quantity of rain has been very small. As a collector it has often proved more efficient than the other kind, when heavy rain and hail have fallen accompanied with much wind. The observations have been made with constant regularity at 9 o'clock a.m., except for a short period during the month of March, 1863, and the number of days during which rain fell in that month is not known.

During the first six seasons Newman's gauge was employed ; during the remaining seasons Glaisher's. During four seasons the two gauges were placed side by side, and the readings of each carefully noted. The float-gauge showed 88·829 inches during this period, and Glaisher's gauge showed 93·250 inches, and these comparative measurements have been made use of for correcting the readings of the first six seasons, during which the float-gauge alone was employed.¹

The position of the instruments was in a garden within the city, about 2,500 feet above the level of the Mediterranean, open on all sides, the houses which bound it on the south and west being too far removed to influence the fall of rain into the pluviometers.

Palestine being one of those countries in which a long period of dry weather is regularly followed by one of rainy weather, it will be more practically useful to arrange this report according to seasons than according to years, notwithstanding that each season includes the later months of one year and the early months of the next.

1. The mean duration of each rainy season has been 188 days—the longest being 221 days, the shortest 126 days. The mean duration of each dry season has been 177 days, the longest being 211 days, the shortest 134 days. [Table I.]

2. In ten seasons the rains began between the 4th and 28th of October (inclusive) ; in twelve seasons between the 1st and 28th of November

¹ For this reason my report of the first five seasons, which was printed in the "Times" of August 16th, 1865, differs slightly from the present.

(inclusive). [Table I.] In four years there has been a slight fall of rain in the month of September, and it is remarkable that on each of these occasions the rainfall of the ensuing season was considerably below the average. [Table II.]

3. In eight years the last rain of the seasons fell between the 2nd and 29th of April (inclusive), and in fourteen years between the 1st and 27th of May (inclusive). A very little rain has sometimes fallen in June. [Table I.]

4. The mean number of days on which rain has fallen in each season has been 52—the highest being 71, the lowest 37. [Table II.]

5. The mean quantity of rain measured in each season has been 22·760 inches—the greatest quantity being 42·932 inches, the smallest 12·269 inches. [Table II.]

6. The mean quantity which has fallen in the several months included in the rainy season, and the mean number of rainy days in each month, are as follows :—

Months.	No. of rainy days.		Inches of rain.	
October	1·50	....	·514
November	5·31	..	1·664
December	9·04	....	4·718
January	10·28	....	5·479
February	10·43	....	5·207
March	8·51	....	3·531
April	5·45	....	1·448
May	1·59	....	·199
				<hr/>
				52·11
				<hr/>
				22·760

7. During the rainy seasons rain falls on one or more days, and is followed by one or more days of fine weather, and these fine days of the winter and early spring months are some of the most enjoyable that the climate of Palestine affords. The mean number of *rainy periods* in each season has been 23—the highest being 30, the lowest 16. These rainy periods seldom cover more than seven or eight days, and in some entire seasons it has not rained more than five or six consecutive days. Once it rained and snowed for fourteen days (in January, 1861), and once for thirteen days (in February, 1882). Table III has been drawn up to show the number of days in each *rainy period*, and the interval of fine weather which has followed.

8. The rainy season divides itself into three periods. First, that of the early rain, called by the peasants *el wasm el bedry*, “the early sign,” which moistens the land and fits it for the reception of the seed, and is consequently the signal for the commencement of ploughing. Second, the copious winter rain, which saturates the earth, fills the cisterns and pools, and replenishes the springs. Third, the latter or spring rain, which causes the ears of corn to enlarge, enables the wheat and barley to support the dry heat of the early summer, and without which the harvest fails.

Between the commencement of the early rain and the setting in of the heavy winter rain a considerable period elapses, and again between the termination of the winter rain and the close of the rainy season by the fall of the last of the spring rains, but these periods are usually broken by the occurrence of rainy days, so that it is often not easy to decide to which period a particular fall of rain should be assigned. Thus in the year 1881 the first rains of autumn fell on November 5th, and were separated by a period of thirty-six days from the heavy winter rains which began on December 18th, but this period was broken by the occurrence of three non-consecutive days on which rain fell; and at the end of the same season the heavy rains terminated on the 15th of April, and the period of thirty-six days which elapsed before the last spring rain fell was broken by the occurrence of four rainy days. The times of the commencement and termination of the heavy winter rains are as uncertain as those of the autumn and spring rains. As a rule, it may be considered that the autumn or early rains extend from the commencement of the rainy season in October or November until the middle of December, the winter rains from the middle of December until the middle or end of March, and the latter or spring rains from the middle of March until the termination of the rainy season in April or May.

9. Although rain may fall when the wind is blowing from any point of the compass, the copious rains are almost invariably brought from a western quarter. Of the 506 falls of rain included in this report, 8 were from the north, 14 from the north-east, 12 from the east, 10 from the south-east, 19 from the south, 238 from the south-west, 156 from the west, and 49 from the north-west. On 149 occasions an easterly wind immediately preceded the change which ushered in the rain. The direction of the wind frequently alters during the fall; if it passes to the north, the rain ceases; a change from any quarter towards the south-west usually indicates a continuance of rain. [Table IV.]

10. On 248 occasions the fall of rain commenced after a gradual fall of the mercury in the barometer during two or more days, on 144 occasions after a fall during one day, and on 114 after a slight rise. Not unfrequently, after a gradual diminution of the atmospheric pressure, rain begins to fall as the glass begins to rise. During the fall of rain, the mercury rose on 281 occasions, fell on 69, first fell and then rose on 132, and on 24 occasions remained steady until after the rain had ceased. It is during the severe and stormy rainy periods of the winter season that the glass commonly falls and afterwards rises. [Table V, A and B.]

11. It is popularly supposed that the atmosphere becomes warmer as the rain falls. This, however, is not usually the case. The sensation of increased warmth is caused by diminution in the amount of evaporation from the surface of the body when the air becomes saturated with moisture. On 369 occasions the temperature of the air became lower as the rain fell, on 90 it rose slightly, and on 47 remained stationary, or nearly so, until the rain ceased. [Table VI.]

12. In fourteen seasons snow has fallen, and eight seasons have passed

without snow. The last few days of December, the months of January and February, and the earlier part of March, are the periods for snow, but in 1870 there was a heavy fall (1·8 inch) on the 7th and 8th of April, a very remarkable and extraordinary occurrence. For the most part the snow is in small quantity, and soon melts, but very heavy snow-storms sometimes occur, and the snow may then remain unmelted in the hollows on the hill-sides for two or three weeks. The deepest snowfall was on the 28th and 29th of December, 1879, when it measured 17 inches where there was no drift. In February, 1874, it was $8\frac{1}{4}$ inches deep, and on the 14th of March, 1880, 5 inches. The drifts are sometimes exceedingly deep. [Table VII.]

13. It is remarkable that of twelve earthquakes registered during these twenty-two years, no less than nine have been experienced in the rainy season, namely, one in October, one in December, one in January, two in February, three in March, and one in April; eight were associated with storm, and four occurred during snow. In Table VIII the readings of the barometer before and after the earthquakes are noted, and the direction of the wind at the time of their occurrence. In nearly every instance they have been preceded or followed by an easterly wind.

14. The overflow of Beer Ayûb, in the Kidron Valley, is regarded by the inhabitants of Jerusalem as an indication that there will be no serious deficiency of water for drinking during the ensuing summer. Careful observations show that the overflow of this well does not depend so much on the quantity of rain which has fallen since the commencement of the season as upon a large quantity falling in a short time. Table IX shows the circumstances under which it has overflowed on every occasion during the period included in this report. On each of the four occasions on which rain has fallen in September there has been no overflow of Beer Ayûb in the following rainy season.

15. A very deficient rainfall is invariably followed by a deficient harvest, but a rainfall much above the average does not necessarily result in a proportionately large harvest. The conditions most favourable to a good yield of wheat and barley are a liberal supply of winter rain, falling on many days, with no prolonged intervals of fine and dry weather, and a copious fall of latter or spring rain. Taking the price of wheat as an indication of the quality of the harvest, we find that after the four years of lowest rainfall, the mean of which was 14 inches, the mean cost of a measure of wheat was 31 piastres; after the three years of highest rainfall the mean of which was 37 inches, the mean cost of a measure of wheat was 23 piastres; and after the four years of nearly average rainfall, the mean of which was 23 inches, the mean cost of a measure of wheat was only 18 piastres. When the previous part of the season has been favourable, the harvest may be said to depend entirely upon a sufficiency of the late rains, but a favourable latter rain cannot save the harvest if the corn has previously been extensively shrivelled by a long continuance of easterly winds, nor will the most promising harvest prove satisfactory unless a sufficiency of rain fall at the end of March or during the month of April.

In Table X, the total rainfall, the number of rainy days, and the amount of latter rain, in each season, are placed for comparison in the same column with the price of wheat during the ensuing summer. In using this table it should be remembered that there has been a gradual rise of prices in Palestine during the last twenty years, and that other circumstances besides the rainfall of the season sometimes influence the price of corn.¹

16. In the Hebrew scriptures, whilst **מטר** is used as a generic term for rain, **גשם** appears to signify the pouring winter rain, **מורה** the early rain, and **מלקוש** the latter rain. In the well-known passage in Joel (ii, 23), the three are mentioned together, and the connection indicates the necessity of all three for the production of a fruitful harvest: "He will cause to come down upon you the heavy winter rain **גשם**, the early rain **מורה**, and the latter rain **מלקוש**, . . . and the floors shall be full of wheat;" and again in Hosea (vi, 3): "He shall come to us like the heavy winter rain **גשם**, like the latter rain **מלקוש**, and the former rain **יורה** upon the earth"—all that are required to fertilise it, neither being sufficient alone. The beautiful description of spring in the Song of Solomon (ii, 11, *et seq.*) is untrue to nature as rendered in our English translation. The flowers appear on the earth, and the time of the singing of birds comes at least six weeks before the rain is over and gone. It is when the heavy winter rain **גשם** ceases, and the warm spring weather commences, that the flowers appear, the birds begin to sing, and the voice of the turtle is heard, and it is during this pleasant period that the latter rains fall at intervals. (Cf. Gen. vii, 12, and Ezra x, 13.)

II. ATMOSPHERIC PRESSURE, TEMPERATURE, WINDS, CLOUDS, DEW.

Atmospheric Pressure.

1. Jerusalem is 2,500 feet above the level of the Mediterranean Sea, and the mean height of the barometer at 9 a.m. during twenty-one years, corrected for index error and reduced to 32° Fahr., has been 27·398. The highest reading during the period was 27·816, on the 31st December, 1879; the lowest, 26·972, on the 22nd April, 1863, and the 3rd February, 1865, so that the extreme range has been 0·844. The mean annual range has been 0·626. During the eight months in which rain falls, namely, October to May inclusive, the mean height of the mercury has been 27·428; and during the four summer months, when rain very seldom falls, namely, June to September inclusive, 27·331. The months of lowest pressure are July and August, when the mean reading has been 27·290. [Tables XI, XII, XIII.]

¹ War, for instance, and other political disturbances, which cause a larger number of young men than usual to be taken for soldiers. After a very bad harvest, the peasants are too poor to sow largely the ensuing season, and consequently the price of wheat never comes down to the average in one year, however good the crop may be.

2. The mean monthly range has been 0·305. The highest and the lowest readings have occurred in the winter or spring seasons. During the five months from December to April inclusive, the mean monthly range has been 0·423, and during the seven months from May to November inclusive, 0·222. [Table XIII.]

Temperature.

1. To carry on a continuous series of meteorological observations in Jerusalem is extremely difficult, owing to the delays and uncertainties involved in replacing broken or defective instruments, and although great and constant care has been taken to make regular observations, it has several times happened that for a long period one or more of the thermometers has been wanting. The following report on temperature is founded chiefly on observations made through eight successive years, namely, 1864 to 1871 inclusive, with only one short break which does not materially influence the result.¹

2. The mean temperature during this period was 62·8° Fahr. The coldest month is February, when the mean temperature was 47·9°. It rises month by month until August, when it was 76·1°, and then sinks again month by month until the following February. [Table XIV.]

3. Although the mean temperature is highest in August, the hottest days do not always occur in that month. The highest temperature during these eight years was on the 24th June, 1869, when it reached 103·5°. In May also and September the temperature sometimes rises to 100° or higher. The highest temperature observed during twenty-one years was on the 28th and 30th August, 1881, when it remained for some hours at 112°. The mean temperature during seven days, terminating on August 31st in that year, was 94·4°. [Table XIV.]

4. Although the mean temperature is lowest in February, the minimum of the year does not always occur in that month. The lowest temperature observed during twenty-one years was on the 20th January, 1864, when the minimum thermometer registered 25° Fahr., or 7° of frost. In February and October also, and once in April, a minimum of 32° and 30° has been noted. In Jerusalem frost generally occurs on five or six nights in the course of the winter, but it is rare for ice to remain throughout the day, except in cold situations sheltered from the sun. It will be remembered that the thermometrical observations are made in a garden within the city. It is no doubt often much colder on the hills outside. [Table XIV.]

5. The mean monthly range has been 39·9°. It is greatest in the spring, early summer, and autumn, less in July and August, and least in December, January, and February. From its maximum of 49·8°, in May, it sank to 37·3° and 38° in July and August, rose again to 44·8° in

¹ My warm thanks are due to Mr. Samuel Wiseman and Mr. Joseph elJemel, of the London Society's Mission to the Jews, for assistance in carrying on the observations.

October, again sank to 31 and 31·6 in December and January, and again rose through February, March, and April to its maximum in May. Thus there are in the course of the year two maxima and two minima of monthly range. [Table XIV.]

6. The mean daily range has been 19·5°. It is greatest in summer from May to October, having during these six months been 23·3°. During the six months from November to April it was 15·7°. The greatest mean daily range was in September, 24·1°; the least in January, 13°. [Table XIV.]

7. The climate of Jerusalem presents at different times the extremes of dryness and moisture. Not unfrequently during the rainy months the dry and wet bulb of the hygrometer stand at the same point, whilst in "sirocco" weather the difference is very great. The mean difference throughout the year at 9 a.m. has been 9·6°; during the six months from November to April, inclusive, 5·8°; and during the six months from May to October, inclusive, 13·1°. But 9 a.m. is not the driest hour of the day. When "sirocco" is prevalent the dry and wet bulb at noon, or a little later, sometimes differ 25 or even 30 or more degrees. On one extraordinary occasion, in August, 1881, there was for a few hours in the middle of the day a difference of 40°, the dry bulb marking 112°, and the wet bulb 72°, and on two or three days the difference was 35° at 9 a.m. [Table XIV.]

Winds.

1. In no country are the health and comfort of the inhabitants and the fruitfulness of the soil more immediately and obviously influenced by the character and direction of the wind than in Palestine. The north wind is *cold*, the south *warm*, the east *dry*, and the west *moist*; and the winds from the intermediate quarters partake of these characteristics in a degree corresponding to their nearness to the cardinal points; the north-east wind is cold and dry, the north-west cold and moist, the south-east hot and dry, and so on.

2. North and north-westerly winds prevail most in the summer months, when they are cool and refreshing, moderately dry, and accompanied by no clouds, or only a few cirri or cumuli. The northerly winds of winter are cold and sharp, and dry or moist according as they come from north-east or north-west. When from the latter quarter they are frequently accompanied by masses of cumulus, which have a very beautiful appearance against the deep blue of the sky. The coolness and sharpness of the north winds, even in the summer season, are much dreaded, especially by the inhabitants of the maritime plain, where they produce sore throats, fevers, and dysenteries. These winds are called *sumāwy*, i.e., heavenly, probably from the clear blue sky which accompanies them. North, north-west, and north-east winds have occurred on 182 days in the year at 9 a.m. [Table XV.]

Whenever during summer there is little wind for several days the heat becomes very great, the mercury in the barometer rises, and the air becomes almost as dry and destitute of ozone as in a *sirocco*, even though what little wind there is blows from a northerly quarter. Ordinarily

this condition is obviated by the springing up of a strong westerly breeze in the afternoon. This breeze is felt as early as 9 or 10 a.m. at Jaffa and other places along the coast, but does not usually reach Jerusalem before 2 or 3 p.m., sometimes not until much later. After sunset it subsides, but soon rises again, and continuing through a great part of the night refreshes the parched land with the abundance of moisture with which it is laden. From a sanitary point of view the value of this evening breeze can hardly be overrated. When it does not blow, or blows very gently, bringing no clouds, and not rising again after the lull which follows sunset, the nights are hot and depressing, there is no dew, and the mornings are wanting in freshness.

One of the most important differences between the climate of the hill district and that of the low western coast of Palestine is in connection with this daily wind from the sea. Although felt nearly every day on the coast, it does not always reach the hills, and hence in very hot weather, when Jerusalem (for instance) is almost insupportable from a severe easterly wind, Jaffa may be comparatively cool and pleasant. In traversing the plain also this wind looses much of its moisture, and it is only after it has been blowing with considerable force for some hours that its refreshing qualities are fully experienced. The struggle for the mastery which sometimes takes place when a current of hot, dry, heavy air from the east meets this moist sea breeze is extremely interesting to witness. Neither being strong enough to overcome the other, the lighter west wind occasionally rises above the eastern current, and clouds may be seen floating towards the east, whilst the lower stratum of air is moving westward, and this may continue some time before a fusion takes place and equilibrium is established (see below). Sometimes a violent disturbance occurs, whirlwinds are produced, clouds and pillars of dust arise, and an hour or more may elapse before the west wind prevails, for it is always the west wind that obtains the victory after these severe contests. At other times the change to a westerly wind is so silent as to pass unnoticed, except in consequence of the change in the quality of the air. The lassitude occasioned by extreme heat suddenly begins to pass away, the spirits revive, exertion again becomes a pleasure, and a glance at the vane shows that a westerly wind is already established. It is very curious, if one happens to be looking out, to see the weathercock suddenly turn round without apparent cause, and almost immediately to feel the refreshing influence of cooler and moister air. The wind has blown direct from the west fifty-five times in a year at 9 a.m. Though most frequent in July and August the west wind is more equally distributed over the several months than any other wind. [Table XV.]

3. Easterly winds are common in autumn, winter, spring, and the month of May. In summer they are rare; on a mean of sixteen years it has blown from an eastern quarter on 101 days in the year at 9 a.m.; from June to September, inclusive, on three days in each month; from October to May, inclusive, on eleven days in each month. [Table XV.] But it is not uncommon during the hot weather for an easterly wind to

blow for three or four hours in the middle of the day, and in the evening to give way to the westerly wind which continues until 10 or 11 o'clock next morning, so that the register made at 9 a.m. does not show all the easterly winds that have occurred.

In winter the east wind is accompanied by a clear blue sky, with perhaps a few cirri. It is dry, stimulating, and, if not too strong, very agreeable. But in the warmer months it is unpleasant and depressing from its great heat and dryness, and the haze and dust which occasionally accompany it. It is when the wind blows from the south-east that it acquires the peculiarities which Europeans usually signify by the term *sirocco*. At such time the sky may be cloudless, or with some cirrus and stratus, the temperature is high, 84° to 90° , or higher, the air destitute of ozone, and extremely dry, the difference between the wet and dry bulb being often as much as 24° or even 28° or 30° . There may be calm, but sometimes the wind amounts to 1 or 1.5, and veers between east, south-east, and south. The more the wind tends to the south, the more dull and overcast is the sky, and the more disagreeable to the feelings the state of the atmosphere; the more it tends to the east, the clearer is the sky and the stronger and fresher the breeze. The worst kind of *sirocco* dries the mucous membrane of the air passages, producing a kind of inflammation resulting in catarrh and sore throat; it induces great lassitude, incapacitating for mental as well as bodily exertion, in those who walk or work in it; headache, with a sense of constriction as if a cord were tied round the temples, oppression of the chest, burning of the palms of the hands and soles of the feet, accelerated pulse, thirst, and sometimes actual fever. It dries and cracks furniture, loosening the joints of tables and chairs, curls the covers of books and pictures hung in frames, parches vegetation, sometimes withering whole fields of young corn. Its force is not usually great, but sometimes severe storms of wind and fine dust are experienced, the hot air burning like a blast from an oven, and the sand cutting the face of the traveller who has the misfortune to encounter it. This kind of air has a peculiar smell, not unlike that of the neighbourhood of a burning brick-kiln. Sometimes the most remarkable whirlwinds are produced, especially in the western plain near the hills, by the meeting of a strong east or south-east wind with a wind from the west or north. Clouds of sand fly about in all directions, now taking the traveller in front, now behind, and now on the side, and the gusts of wind are so violent as to blow weak persons from their horses, and to overturn baggage animals. The cold *sirocco* of winter often blows with much force, and when it comes from a few degrees north of east, it is so cold and piercing as sometimes to kill those who are exposed to it without sufficient clothing, instances of which occurred in 1867.

A great number of observations have been made with a view of determining the amount of ozone in the atmosphere in different states of the weather, and these repeated experiments have shown that none is to be detected during the prevalence of the *sirocco* wind. It was thought the extreme dryness of the air might prevent the chemical reaction, but the

result was the same when the paper was kept moistened. The west, north-west, and especially the south-west currents of air are those most richly charged with ozone.

The following is a note of a summer *sirocco* written at the time of its occurrence:—"At 9 a.m. on August 24th, 1877, a brisk wind was blowing direct from the east, there was considerable haze and dust, and high up towards the north-east some cirro-cumulus. In the course of the morning cumulus increased, and became mingled with the haze. At sunset it was 3. The dry bulb at 9 a.m. was 96° , wet bulb 63° ; at 11 a.m., dry bulb 102° , wet bulb 66° ; at noon, dry bulb 103.3° , wet bulb 66.5° . About 5 p.m. a rainbow was observed, and a few drops of rain were said to have fallen a little west of the city. During this remarkable day a very dry, and consequently heavy, stratum of heated air was driven with considerable force from the east, and was met (probably in the western plain) by a moist current from the sea; they did not immediately mingle, but the light moist air passed onwards towards the east over the heavy stratum of hot dry air, the velocity of both being impeded. The wind below continued east all day, sinking gradually from a force of 0.5 to 0.2, and eventually to 0.0, and in the evening a light soft breeze sprang up from west-south-west which passed round to west soon after sunset. The next morning the two strata of air had commingled, the sky was clear, excepting some haze in the horizon, temperature very high, 97.5° at 9 a.m., rising to 107° at noon, and the difference between the wet and dry bulb had gone down to 34° . At noon the wind, which until then had been north-east, passed by way of north to west." The termination of a late autumn *sirocco* is different. "November 4th, 1868. After *sirocco* had prevailed for more than thirty days, the wind suddenly changed on October 30th, by way of south to west, a breeze sprang up bringing cumuli and loose masses of nimbus; much dew was deposited during the night, and there were a few drops of rain. Two gusty cloudy days followed, the atmosphere becoming more and more hazy from fine dust, and on the evening of November 2nd a heavy, long-continued shower of rain fell, preceded by thunder. The next day there was more rain, and by the morning of the 5th upwards of an inch had been measured. During the days preceding the rain the barometer and thermometer both fell—the former gradually, the latter more suddenly. At 9 a.m. on October 30th the temperature was 88° , at 9 a.m. on the 31st 66° , and on the 3rd November it had fallen to 53° , a difference of 35° in four days."

It is an old and common saying that a *sirocco* always lasts three days, but like many other popular sayings this is only partially true. A *sirocco* may last three days, or it may last twenty or even thirty days. Thus in 1868 there was *sirocco* almost every day from 28th September until the weather began to break up for rain on October 30th. During the continuance of *sirocco* there is frequently a partial change in consequence of the sea-breeze of the afternoon reaching the hills, and the vane is often found pointing to north or north-west at 9 a.m. It occasionally happens that the air has all the qualities of a bad *sirocco* when the wind is blowing from a

northerly or westerly quarter. No doubt the *sirocco* storms are often of the nature of cyclones, and these instances are probably sometimes due to the returning current of a wind which originally proceeded from some point between south and east. But the peculiarities of this wind, its heat, its dryness, and its deficiency in ozone, are probably of telluric origin; and it appears that whenever a very high temperature prevails for some days without wind, the quality of the air in contact with the surface of the earth becomes modified, and a wind springing up from any quarter may then have for a time the properties of the true *sirocco*—the *simoom*, or poisonous wind, which usually comes from the interior of Arabia.

4. The mean force of the wind at 9 a.m. has been 0·46 on a mean of ten years. It is greatest in February, March, and April, in which the mean has been 0·65, and least in August, September, and October, when the mean has been 0·30. During the winter months the force of the wind sometimes amounts to 3·5 or 4, on a scale of 0—6, but it is very seldom that damage of a serious nature is done to trees or buildings. The mean number of days on which there was calm at 9 a.m. has been 108 in a year, the greatest number being in the five months from September to January inclusive, when the mean in each month was eleven days. As in all mountain districts, absolute calm is rare for any length of time, and a very delicate instrument might perhaps have detected some movement of the air on many of the days entered as calm. [Table XVI.]

Clouds.

1. As in other warm countries, clouds are in Palestine a very important element of the climate. Their presence is beneficial in three ways—they are at once a cause and a sign of moisture in the air; by intercepting the rays of the sun they produce shade which moderates the heat; and by the evaporation of the water of which they are composed the temperature of the atmosphere is lowered. The mean annual amount of cloud at 9 a.m. on a mean of sixteen years has been 2·8. The amount is smallest in July and August (0·6 and 0·9); it rises gradually through the autumn to its maximum in the winter months, and then falls again gradually to its minimum in July. On the same mean, 140 days in the year have been cloudless at 9 a.m., the maximum number being in July (21·5), and the minimum in February and March (5·1 and 5·5). [Table XVII.]

Dew.

1. During the fine weather of the winter months dew falls in Palestine from the same causes and under the same circumstances as in Europe, the moisture contained in the atmosphere being deposited when the night is favourable to the radiation of heat from the surface of the earth. But in the summer months, when the whole country is arid, and there is no water to evaporate, the copious dews are brought entirely by the westerly winds from the sea. If no westerly breeze, or a very light one, springs up

towards evening, there is no dew. The heavy dews of summer which modify the climate so remarkably differ from ordinary dew in the manner of their deposition, *being in great part precipitated in the air in the form of mist before being deposited on the earth.*¹ On summer evenings a few clouds are commonly to be seen in the western horizon soon after sunset. Later in the evening they increase in number, become lower and looser, and sweep past at no great elevation, and often with considerable velocity. After midnight, or earlier, they become still more abundant and still lower, brushing the tops of the hills as they pass, and depositing much of their moisture upon them. Although dew may fall, even in summer, in the usual way on clear nights, the surest sign of a copious deposition is the appearance of clouds with a westerly wind after sunset. Frequently there is a visible moisture in the atmosphere, which yet does not amount to mist or cloud, but produces only a haziness in the horizon, which is indicative of a damp night. Dew is most copious in spring, and in September and October, except during *sirocco* weather, when there is none. It may be noted that clouds and a westerly wind at sunset and afterwards are not always indications of a very damp night. The dew deposited as a result of this condition early in the evening may, if the wind should fall or change to east, entirely evaporate before morning. It is the continuance of the westerly wind through the night that brings abundance of dew. During the prevalence of *sirocco*, and especially when *sirocco* is just commencing or terminating, the sky is sometimes obscured at night by masses of cirro-cumulus and some stratus intermixed, and when this is the case there is usually no dew. But should a wind spring up from the west, and bring cumulus and mist from the sea, a deposit of dew takes place.

After a very dewy night the sky at daybreak is obscured—and often houses, trees, &c., also—by a thick mist, the ground, plants, stones, and especially tents, being wet as if rain had fallen. As the sun rises the mist begins to clear, and large masses of loose flocculent clouds are formed, between which the bright blue sky is here and there visible. These masses of cloud become smaller and denser as the heat increases, forming beautiful cumuli, which in their turn disappear and give place to the dull blue sky usual in summer. The time at which these morning clouds entirely disappear depends on their amount and the heat of the weather. Frequently the sky is quite clear by 9 o'clock, and it is rare for more than one or two masses of cumulus to remain later than 10 or 11 o'clock, but during the day, when the wind is not easterly, a little light cloud may sometimes be seen to form in the sky, and after growing for a time gradually but quickly disappear, to be soon followed by another. This “one cloud” often attracts the attention of the traveller, and becomes an object of

¹ “Aristotle supposed dew to be a species of rain, formed in the lower atmosphere in consequence of the moisture which had been carried up during the day by evaporation being condensed by the cold of the night into minute drops.”—“Penny Cyclop.” Art. DEW.

interest to him as he goes on his way, and not improbably it suggested to St. James that beautiful simile of human life, "What is your life? It is even a vapour (*ἀρμίσ*) that appeareth for a little time and then vanisheth away."

NOTE.

The unhealthy period of the year, the period in which the climatic diseases of the country, such as ophthalmia, fevers, and dysentery, are most prevalent, extends from May to October inclusive. Six things strongly characterise this period. 1. Almost entire absence of rain; 2. Low atmospheric pressure with small range; 3. High temperature with great daily range; 4. Great dryness of the atmosphere; 5. A very small amount of cloud; and 6. Except at the beginning and end of the period, a minimum of easterly winds.

TABLE I.—Showing date of commencement and termination of rains, and the duration of the rainy and dry seasons.

Seasons.	Date of		Duration of	
	Commencement.	Termination.	Rainy Season.	Following Dry Season.
			days	days
1860-1	November 12th	May 25th	195	172
1861-2	November 14th	April 29th	167	185
1862-3	November 1st	April 28th	179	167
1863-4	October 13th	April 26th	197	197
1864-5	November 10th	May 9th	181	175
1865-6	November 1st	April 21st	172	165
1866-7	October 4th	May 12th	221	181
1867-8	November 10th	May 27th	200	158
1868-9	November 2nd	May 7th	187	191
1869-70	November 15th	April 22nd	159	173
1870-1	October 13th	May 2nd	202	173
1871-2	October 23rd	May 24th	215	134
1872-3	October 6th	May 3rd	210	173
1873-4	October 24th	April 5th	164	211
1874-5	November 3rd	May 1st	180	195
1875-6	November 13th	May 16th	186	145
1876-7	October 9th	April 28th	202	174
1877-8	October 20th	May 7th	200	204
1878-9	November 28th	April 2nd	126	208
1879-80	October 28th	May 2nd	188	167
1880-1	October 17th	May 21st	217	167
1881-2	November 5th	May 23rd	200	..
		Means ..	188.5	176.9

TABLE II.—Showing the number of days on which rain fell, and the amount of rain in each month during 22 rainy seasons, from 1860-1 to 1881-2.

Seasons.	1860-1		1861-2		1862-3		1863-4	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	..	..	..	..
October ..	..	..	..	..	..	..	7	1·900
November ..	2	·105	3	·184	9	2·957	1	·190
December ..	7	2·191	13	7·763	7	2·587	12	7·125
January ..	14	9·663	14	12·409	10	9·109	8	6·890
February ..	7	6·495	7	2·270	7	2·402	5	1·503
March ..	5	2·402	3	·633	?	3·695	4	1·082
April ..	1	·316	4	1·003	7	2·112	6	1·648
May ..	4	·475	..	..	..	..	..	..
Totals ..	40	21·647	44	24·262		22·862	43	20·338

Seasons.	1864-5		1865-6		1866-7		1867-8	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	2	·091	..	..	..	..	..	..
October ..	..	..	..	..	5	1·745	..	..
November ..	4	2·645	11	1·560	8	1·835	4	2·240
December ..	7	1·648	11	5·450	13	2·970	10	6·975
January ..	7	4·541	14	5·055	11	9·245	9	3·565
February ..	8	5·084	9	3·175	12	6·067	18	10·925
March ..	5	·422	9	3·460	8	2·135	7	3·285
April ..	3	·765	4	·290	3	2·010	13	1·928
May ..	3	·370	..	..	5	·730	1	·140
Totals ..	37	15·475	58	18·990	65	26·737	62	29·058

Seasons.	1868-9		1869-70		1870-1		1871-2	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	1	·270	..	..	..	..
October ..	..	..	..	..	4	2·290	2	1·580
November ..	7	1·186	6	1·470	1	·010	1	·100
December ..	13	8·047	5	1·165	4	1·450	13	6·489
January ..	15	7·715	9	1·235	9	2·943	6	3·105
February ..	12	3·265	1	·690	11	4·415	17	5·249
March ..	4	1·945	9	3·990	16	6·747	7	1·430
April ..	8	2·363	13	3·719	3	1·100	4	·420
May ..	2	·395	..	..	1	·190	3	·108
Totals ..	61	24·916	43	12·269	49	19·145	53	18·481

Seasons.	1872-3		1873-4		1874-5		1875-6	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	..	..	1	·030
October ..	4	·310	1	·010	..	..	..	..
November ..	7	3·390	7	4·410	6	2·510	6	1·120
December ..	7	6·235	13	9·300	6	1·435	9	3·190
January ..	4	·130	15	8·430	14	6·790	7	3·420
February ..	10	6·032	12	7·215	12	4·085	10	4·140
March ..	11	1·935	20	10·017	14	10·520	7	2·270
April ..	2	·890	3	·130	4	1·040	8	1·965
May ..	1	·010	..	..	1	·230	4	350
Totals ..	46	18·942	71	39·512	57	26·610	51	16·455

Seasons.	1876-7		1877-8		1878-9		1879-80	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	2	·790	..	..
October ..	1	·080	5	2·180	..	..	3	·815
November ..	7	1·690	11	5·015	1	·025	5	·685
December ..	3	·490	13	7·345	4	3·000	6	4·235
January ..	9	1·595	14	13·390	6	·980	15	5·995
February ..	13	8·759	13	11·490	6	2·265	12	4·035
March ..	5	·885	7	2·350	17	7·520	7	5·635
April ..	3	·210	2	·510	3	1·520	6	2·065
May ..	..	..	3	·652	..	..	1	·100
Totals ..	41	13·700	68	42·932	37	15·310	55	23·565

Seasons.	1880-1		1881-2		Mean of 22 seasons.	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	..	..
October ..	1	·400	..	..	1·50	·514
November ..	5	·860	5	2·430	5·31	1·664
December ..	15	12·995	8	1·720	9·04	4·718
January ..	3	1·275	11	3·075	10·28	5·479
February ..	12	4·430	16	12·590	10·43	5·207
March ..	10	4·355	4	·970	8·51	3·531
April ..	8	2·205	12	3·650	5·45	1·448
May ..	2	·065	4	·570	1·59	·199
Totals ..	56	26·585	60	25·005	52·11*	22·760

* 21 seasons.

TABLE III.—Showing the number of days in each rainy period, and the interval of fine weather following.

—	1860-1		1861-2		1862-3		1863-4	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	6	1	7	1	15	1	2
	1	11	1	7	4	1	2	9
	1	3	1	7	2	2	3	1
	2	9	1	1	1	3	1	9
	1	2	6	1	1	4	1	22
	1	1	1	3	1	4	1	7
	1	1	1	2	1	2	7	9
	1	22	1	4	1	2	2	1
	3	3	2	1	1	11	2	6
	14	4	5	4	3	5	4	4
	2	7	5	7	1	10	3	7
	1	3	4	5	1	5	1	12
	1	16	1	2	6	2	1	3
	1	12	1	1	4	2	1	2
	1	2	1	10	1	5	1	2
	3	22	2	5	1	1	2	13
	1	19	3	12	1	8	3	21
	1	1	2	17	(?) 2	?	1	16
	2	11	1	20	1	3	1	1
	1	..	2	7	1	9	1	4
	..	..	2	..	3	1	1	3
	..	..	..	..	2	..	3	..

Rainy periods..	20	..	21	..	22	..	22	..
Rainy days ..	40	..	44	..	..	..	43	..
Dry days ..	155	..	123	..	..	..	154	..
Duration of rainy season } days	195	..	167	..	179	..	197	..

TABLE III—*continued.*

—	1864-5		1865-6		1866-7		1867-8	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	11	3	10	1	15	1	1
	1	2	2	4	3	1	3	19
	2	9	4	1	1	7	2	7
	2	3	2	12	3	7	2	1
	3	1	3	11	2	4	3	9
	1	8	8	6	2	5	3	13
	1	14	7	2	1	9	4	1
	1	2	2	3	4	4	2	3
	3	11	2	1	3	8	2	6
	3	6	1	2	3	2	1	1
	2	9	1	4	1	1	3	3
	1	5	2	6	3	4	1	3
	3	1	2	1	6	13	6	2
	1	2	1	6	3	3	8	7
	1	2	2	6	2	3	2	1
	1	3	5	6	2	3	3	13
	1	1	1	2	1	1	2	5
	1	8	1	3	2	8	5	3
	1	8	4	9	6	10	3	8
	1	16	1	4	2	2	2	1
	1	1	2	15	2	8	3	31
	2	18	2	..	3	2	1	..
	2	3	..	..	1	8	..	..
	1	..	..	..	3	28	..	..
	..	..	..	..	5	..	..	..
Rainy periods ..	24	..	22	..	25	..	22	..
Rainy days ..	37	..	58	..	65	..	62	..
Dry days ..	144	..	114	..	156	..	138	..
Duration } of rainy } days season	181	..	172	..	221	..	200	..

TABLE III—*continued.*

—	1868-9		1869-70		1870-1		1871-2	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	2	1	1	3	1	7	2	28
	2	9	4	6	1	5	1	7
	1	3	1	1	2	2	2	9
	1	4	1	7	1	42	5	1
	1	6	2	9	1	3	1	1
	4	3	2	16	3	16	2	1
	1	2	2	3	3	1	2	5
	4	1	1	8	1	6	1	5
	2	6	1	1	3	10	2	10
	2	12	2	1	4	3	2	4
	2	3	1	1	1	9	2	7
	4	1	1	2	1	1	4	1
	4	2	1	8	4	2	5	3
	1	1	1	22	3	3	3	4
	1	1	3	11	11	1	5	6
	3	1	2	2	3	9	1	14
	1	4	4	8	2	8	4	8
	2	1	2	2	1	9	4	7
	5	4	5	4	2	16	1	5
	1	7	2	1	1	..	1	17
	4	13	4	..	..	..	1	7
	1	5	..	..	..	..	1	12
	2	13	..	..	..	..	1	..
	2	3	..	..	..	..	..	..
	3	3	..	..	..	..	..	..
	2	10	..	..	..	..	..	..
	1	2	..	..	..	..	..	..
	1	5	..	..	..	..	..	..
	1	..	..	..	..	..	..	..
Rainy periods. .	29	..	21	..	20	..	23	..
Rainy days ..	61	..	43	..	49	..	53	..
Dry days ..	126	..	116	..	153	..	162	..
Duration of rainy season } days	187	..	159	..	202	..	215	..

TABLE III—continued.

—	1872-3		1873-4		1874-5		1875-6	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	14	1	19	2	5	3	5
	3	14	1	5	1	6	1	2
	2	1	3	2	1	1	1	4
	5	26	3	15	1	7	1	5
	1	12	6	1	1	2	1	4
	6	14	3	4	1	7	1	2
	1	7	4	2	2	2	4	3
	2	6	4	5	1	13	1	2
	1	2	3	2	2	6	1	5
	1	6	2	6	1	1	1	2
	2	6	2	1	2	1	2	9
	1	1	3	1	5	8	1	5
	3	1	2	1	2	1	3	2
	2	3	1	2	2	3	1	10
	1	7	1	2	3	2	4	2
	3	4	1	1	3	5	3	5
	3	1	1	1	1	2	2	7
	3	6	3	2	4	3	1	4
	1	3	1	4	3	4	1	1
	2	16	1	3	1	1	3	2
	1	14	5	2	2	1	2	5
	1	..	5	5	6	6	1	14
	..	..	4	1	1	7	2	3
	..	..	1	1	4	4	4	3
	..	..	7	4	2	4	2	22
	..	..	2	1	2	21	1	7
	..	..	1	..	1	..	3	..
Rainy periods..	22	..	27	..	27	..	27	..
Rainy days ..	46	..	71	..	57	..	51	..
Dry days ..	164	..	93	..	123	..	135	..
Duration of rainy season } days	210	..	164	..	180	..	186	..

TABLE III—*continued.*

—	1876-7		1877-8		1878-9		1879-80	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	28	1	2	1	1	5	4
	1	6	3	1	1	22	1	11
	4	8	1	7	1	1	1	7
	2	20	1	3	2	20	1	15
	1	1	1	1	1	4	1	6
	1	8	3	10	3	3	1	4
	1	1	3	1	2	4	1	2
	2	8	3	8	1	6	3	3
	3	6	2	1	2	3	8	2
	1	5	3	8	2	3	1	3
	3	3	5	1	1	11	2	1
	1	3	2	1	3	1	1	2
	7	4	3	4	9	3	3	15
	4	8	2	7	3	3	5	2
	1	2	4	2	1	4	4	1
	2	10	3	1	4	..	2	3
	1	1	1	3	..	..	1	11
	1	13	2	4	..	..	7	21
	1	2	4	2	..	..	1	6
	1	20	2	2	..	..	3	9
	1	4	4	2	..	..	2	5
	1	..	2	1	..	..	1	..
	..	..	1	4	..	..	..	..
	..	..	2	4	..	..	..	..
	..	..	1	14	..	..	..	..
	..	..	2	4	..	..	..	..
	..	..	2	18	..	..	..	..
	..	..	2	12	..	..	..	..
	..	..	2	4	..	..	..	..
	..	..	1	..	..	..	..	..
Rainy periods..	22	..	30	..	16	..	22	..
Rainy days ..	41	..	68	..	37	..	55	..
Dry days ..	161	..	132	..	89	..	133	..
Duration of rainy season } days	202	..	200	..	126	..	188	..

TABLE III—*continued.*

—	1880-1		1881-2	
	Days of		Days of	
	rain.	interval.	rain.	interval.
	1	31	3	12
	1	5	1	6
	1	3	1	6
	5	3	1	12
	5	2	5	6
	1	9	1	1
	1	1	1	3
	3	1	1	9
	3	13	10	8
	2	10	13	11
	1	9	3	17
	2	3	2	5
	4	3	1	3
	2	3	1	3
	4	6	6	6
	4	5	4	7
	1	4	2	6
	3	4	1	1
	2	17	1	18
	8	21	2	..
	1	8	..	..
	1	..	..	..
Rainy periods..	22	..	20	..
Rainy days ..	56	..	60	..
Dry days ..	161	..	140	..
Duration of rainy season } days	217	..	200	..

TABLE IV.—Showing connection of rain with direction of wind.

Seasons.	Number of rainy periods.	Direction of wind during rainfall								Easterly wind preceding.
		N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
1860-1	20	..	1	..	..	..	2	16	1	7
1861-2	21	..	1	1	..	1	7	11	..	6
1862-3	22	1	..	2	..	2	7	10	..	8
1863-4	22	..	1	2	..	..	10	9	..	7
1864-5	24	1	1	..	1	2	10	5	4	7
1865-6	22	..	2	..	1	1	11	2	5	12
1866-7	25	..	1	..	..	3	18	3	..	10
1867-8	22	1	..	..	..	..	14	7	..	5
1868-9	29	..	..	1	1	1	17	5	4	5
1869-70	21	..	1	..	..	..	10	6	4	8
1870-1	20	..	..	..	..	..	15	3	2	6
1871-2	23	..	1	1	..	..	13	7	1	5
1872-3	22	..	..	1	..	1	7	8	5	4
1873-4	27	1	1	..	1	1	9	12	2	5
1874-5	27	3	..	1	..	1	11	9	2	9
1875-6	27	..	..	1	2	3	13	5	3	7
1876-7	22	..	..	..	1	..	10	11	..	5
1877-8	30	..	2	1	..	1	13	9	4	9
1878-9	16	1	1	..	..	1	7	1	5	3
1879-80	22	..	..	..	1	1	13	3	4	7
1880-1	22	..	1	1	1	..	11	7	1	8
1881-2	20	..	..	..	1	..	10	7	2	6
Totals ..	506	8	14	12	10	19	238	156	49	149

TABLE V.—Showing connection of rainfall with barometric changes.

Seasons.	Number of rainy periods.	A Rain began after			B During the rain the mercury			
		Gradual fall of mercury.	Fall of one day only.	Slight rise	Rose.	Fell.	First fell then rose.	Remained steady.
1860-1	20	11	2	7	9	4	3	4
1861-2	21	9	8	4	6	8	6	1
1862-3	22	5	11	6	12	4	4	2
1863-4	22	14	2	6	12	4	5	1
1864-5	24	11	5	8	13	5	4	2
1865-6	22	4	14	4	8	3	8	3
1866-7	25	8	12	5	12	1	12	..
1867-8	22	9	10	3	6	6	9	1
1868-9	29	13	8	8	14	4	9	2
1869-70	21	12	6	3	15	2	4	..
1870-1	20	11	7	2	14	2	4	..
1871-2	23	15	3	5	18	1	4	..
1872-3	22	10	3	9	17	1	3	1
1873-4	27	13	7	7	7	6	13	1
1874-5	27	12	11	4	17	3	6	1
1875-6	27	14	8	5	17	2	5	3
1876-7	22	15	4	3	15	2	4	1
1877-8	30	10	10	10	16	3	10	1
1878-9	16	8	4	4	13	1	2	..
1879-80	22	13	4	5	13	3	6	..
1880-1	22	15	4	3	16	1	5	..
1881-2	20	16	1	3	11	3	6	..
Totals.	506	248	144	114	281	69	132	24

TABLE VI.—Showing connection of rainfall with temperature.

Seasons.	Number of rainy periods.	With the fall of rain the temperature		
		Fell.	Rose.	Remained unchanged.
1860-1	20	13	6	1
1861-2	21	16	4	1
1862-3	22	11	9	2
1863-4	22	13	8	1
1864-5	24	18	1	5
1865-6	22	15	3	4
1866-7	25	20	2	3
1867-8	22	14	4	4
1868-9	29	21	5	3
1869-70	21	16	2	3
1870-1	20	14	4	2
1871-2	23	16	5	2
1872-3	22	16	4	2
1873-4	27	21	4	2
1874-5	27	23	1	3
1875-6	27	21	5	1
1876-7	22	18	4	..
1877-8	30	22	6	2
1878-9	16	12	1	3
1879-80	22	17	5	..
1880-1	22	17	4	1
1881-2	20	15	3	2
Totals	506	369	90	47

TABLE VII.—Snow.

Seasons.	
1860-1	January 5th and 11th ; February 1st and 2nd, deep.
1861-2	None.
1862-3	January 24th, February 22nd, 1 inch.
1863-4	None.
1864-5	None.
1865-6	None.
1866-7	None.
1867-8	February 14th, 16th, 21st, 22nd, 26th and 27th.
1868-9	None.
1869-70	April 7th and 8th, 1·8 inch.
1870-1	February 19th.
1871-2	None.
1872-3	February 18th.
1873-4	December 26th, 3 ins.; January 10th, 23rd, 31st; February 6th and 7th, 8½ ins.; February 28th; March 1st, 3rd, 6th, 17th, and 18th, 4½ ins.
1874-5	January 10th and 29th ; March 9th and 27th, 8½ inches.
1875-6	February 4th.
1876-7	February 8th and 17th.
1877-8	January 28th ; February 15th, 16th, and 17th, 5 inches.
1878-9	None.
1879-80	December 28th and 29th, 17 ins. ; March 11th and 14th, 5 ins.
1880-1	March 20th.
1881-2	January 22nd ; February 3rd, 4 inches ; February 10th, 1½ inch.

TABLE VIII.—Earthquakes.

Year.	Date.	Hour of day.	Barometer at		Wind.	Weather.
			previous 9 a.m.	next 9 a.m.		
1863	April 22nd	10.45 p.m.	26·972	27·308	W.	Changing with severesandstorm from east to west.
1864	September 24th	8.15 p.m.	27·522	27·484	W.	Clear.
	March 24th	2.30 a.m.	27·472	27·466	E.	Changed from east to west in afternoon.
1868	January 24th	3.50 p.m.	27·572	27·522	W.	Changed to east next day.
	February 19th	midnight	27·262	27·252	W.	Rain and snow followed.
	October 7th	7.30 p.m.	27·527	27·552	W.	Storm, thunder and rain, changing from sirocco.
1870	June 24th	7 p.m.	27·472	27·442	W.	Clear and still.
1873	June 29th	2.30 a.m.	27·472	27·522	W.	Clear and still.
1874	March 3rd	1.40 a.m.	27·472	27·350	S.W.	Snowstorm.
1877	February 15th	7.15 a.m.	27·472	27·390	S.W.	Snow followed.
	March 14th	6.15 a.m.	27·352	27·286	N.W.	Changed from east on day previous.
1879	December 31st	9 a.m.	27·512	27·816	N.	Snow.

Table IX.—The overflow of Beer Ayûb.

Seasons.	Date of overflow.		Inches of rains which fell before.	No. of consecutive days rain immediately before.	Inches of rain which fell on these days.	Rainfall of the season. Inches.
1860-1	Jan. 24th,	1861	8·2	4	5·7	21·647
1861-2	Jan. 2nd,	1862	10·6	3	3·5	24·262
1862-3	Jan. 26th,	1863	10·9	5	5·6	22·862
1863-4	Jan. 9th,	1864	12·2	3	3·6	20·338
1864-5	Did not flow			..	..	15·475
1865-6	{ Jan. 9th,	1866	9·8	4	3·2	} 18·990
	{ March 1st,	1866	15·2	4	2·1	
	{ Jan. 9th,	1867	9·9	7	4·6	
1866-7	{ Jan. 26th,	1867				26·737
	{ Feb. 26th,	1867				
1867-8	Feb. 3rd,	1868	14·3	2	1·6	29·058
1868-9	Dec. 13th,	1868	8·3	2	3·6	24·916
1869-70	Did not flow			..	..	12·239
1870-1	March 9th,	1871	14·5	7	3·4	19·158
1871-2	Dec. 16th,	1871	7·6	3	5·9	18·481
1872-3	Dec. 26th,	1872	9·7	3	5·6	18·942
1873-4	Dec. 27th,	1873	10·4	1	2·4	39·512
1874-5	Feb. 5th,	1875	12·7	2	1·9	26·610
1875-6	Did not flow			..	..	16·445
1876-7	Feb. 10th,	1877	10·7	6	6·7	13·700
1877-8	Dec. 31st,	1877	14·5	1	2·1	42·932
1878-9	Did not flow			..	..	15·310
1879-80	{ Jan. 7th,	1880	7·4	5	1·7	23·565
	{ March 13th,	1880				
1880-1	Doubtful			..	..	26·585
1881-2	Feb. 5th,	1882	12·7	6	5·5	25·005

TABLE X.—To show connection of price of wheat with rainfall.

Seasons	1860-1	1861-2	1862-3	1863-4
No. of rainy days	40	44	..	43
Total rainfall inches	21·6	24·2	22·8	20·3
Latter rain inches	2·975	1·475	4·112	1·675
Price of wheat piastres	17	16	12	18

TABLE X—*continued.*

Seasons	1864-5	1865-6	1866-7	1867-8
No. of rainy days	37	58	65	62
Total rainfall inches	15·4	18·9	26·7	29·0
Latter rain inches	1·135	2·436	4·649	3·913
Price of wheat piastres	23	21	18	22
Seasons	1868-9	1869-70	1870-1	1871-2
No. of rainy days	61	43	49	53
Total rainfall inches	24·9	12·2	19·1	18·4
Latter rain inches	3·417	5·499	3·760	1·628
Price of wheat piastres	18	28	25	18
Seasons	1872-3	1873-4	1874-5	1875-6
No. of rainy days	46	71	57	51
Total rainfall inches	18·9	39·5	26·6	16·4
Latter rain inches	1·555	6·352	6·830	2·315
Price of wheat piastres	24	24	18	17
Seasons	1876-7	1877-8	1878-9	1879-80
No. of rainy days	41	68	37	55
Total rainfall inches	13·7	42·9	15·3	23·5
Latter rain inches	·935	2·952	3·025	4·755
Price of wheat piastres	34	25	39	29

NOTE.—A measure of wheat weighs about 48 lbs. English. A piastre is about twopence.

TABLE XI.—Showing the mean and the maximum and minimum height of barometer and monthly range, during each month of 21 years. Obs. at 9 a.m.

Years.	January.				February.				March.				April.				
	Mean reduced to 32°	Highest.	Lowest.	Monthly range.	Mean reduced to 32°	Highest.	Lowest.	Monthly range.	Mean reduced to 32°	Highest.	Lowest.	Monthly range.	Mean reduced to 32°	Highest.	Lowest.	Monthly range.	
1861	27.405	27.630	27.127	.503	27.566	27.782	27.142	.640	27.406	27.596	27.166	.430	27.420	27.592	27.200	.392	
1862	27.448	27.622	27.232	.390	27.443	27.546	27.255	.291	27.452	27.618	27.330	.288	27.420	27.598	27.150	.448	
1863	27.480	27.672	27.125	.547	27.488	27.606	27.322	.284					27.341	27.552	26.972	.580	
1864	27.472	27.722	27.242	.480	27.430	27.658	27.112	.546	27.411	27.656	27.350	.306	27.306	27.522	27.110	.412	
1865	27.431	27.660	27.342	.318	27.332	27.572	26.972	.600	27.393	27.600	27.372	.228	27.412	27.632	27.370	.262	
1866	27.435	27.740	27.200	.540	27.437	27.738	27.284	.454	27.400	27.656	27.312	.344	27.357	27.630	27.242	.288	
1867	27.466	27.692	27.272	.420	27.507	27.722	27.392	.330	27.317	27.554	27.172	.382	27.339	27.566	27.272	.294	
1868	27.456	27.722	27.272	.450	27.383	27.772	27.252	.520	27.363	27.600	27.222	.378	27.361	27.622	27.200	.422	
1869	27.447	27.772	27.202	.572	27.464	27.710	27.232	.478	27.324	27.536	27.202	.334	27.404	27.652	27.321	.331	
1870	27.464	27.742	27.350	.392	27.456	27.670	27.200	.470	27.399	27.514	27.100	.404	27.389	27.722	27.230	.492	
1871	27.481	27.712	27.390	.322	27.454	27.772	27.322	.450	27.416	27.582	27.246	.336	27.347	27.562	27.272	.290	
1872	27.450	27.710	27.342	.368	27.448	27.700	27.272	.428	27.379	27.672	27.222	.450	27.355	27.548	27.282	.266	
1873	27.512	27.770	27.284	.486	27.426	27.742	27.272	.470	27.315	27.552	27.112	.440	27.397	27.692	27.232	.460	
1874	27.436	27.772	27.072	.700	27.426	27.746	27.160	.586	27.371	27.658	27.140	.518	27.402	27.610	27.360	.250	
1875	27.468	27.706	27.092	.614	27.368	27.664	27.172	.492	27.335	27.686	27.082	.604	27.418	27.592	27.232	.360	
1876	27.519	27.772	27.030	.742	27.426	27.660	27.322	.338	27.353	27.540	27.122	.418	27.396	27.584	27.882	.302	
1877	27.448	27.712	27.122	.590	27.439	27.692	27.234	.458	27.458	27.730	27.286	.444	27.345	27.592	27.192	.400	
1878	27.469	27.704	27.308	.396	27.442	27.740	27.212	.528	27.420	27.672	27.272	.400	27.344	27.620	27.322	.298	
1879	27.487	27.694	27.372	.322	27.489	27.672	27.418	.254	27.338	27.616	27.154	.462	27.415	27.624	27.402	.222	
1880	27.497	27.754	27.348	.406	27.429	27.650	27.422	.428	27.378	27.634	27.156	.478	27.349	27.622	27.208	.414	
1881	27.505	27.746	27.322	.424	27.329	27.578	27.047	.481	27.419	27.698	27.170	.528	27.369	27.656	27.222	.434	
Mean height reduced to 32°																	27.351
Mean of all highest																	27.604
Mean of all lowest																	27.241
Mean monthly range																	.362

TABLE XI—continued.

Years.	September.				October.				November.				December.			
	Mean reduced to 32°	Highest.	Lowest.	Monthly range.	Mean reduced to 32°	Highest.	Lowest.	Monthly range.	Mean reduced to 32°	Highest.	Lowest.	Monthly range.	Mean reduced to 32°	Highest.	Lowest.	Monthly range.
1861	27.428	27.522	27.332	.190	27.511	27.592	27.422	.170	27.549	27.672	27.394	.278	27.421	27.534	27.216	.318
1862	27.445	27.502	27.416	.086	27.499	27.572	27.402	.170	27.442	27.570	27.398	.172	27.482	27.782	27.272	.510
1863	27.471	27.558	27.372	.186	27.530	27.622	27.352	.270	27.502	27.710	27.442	.268	27.413	27.670	27.200	.470
1864	27.384	27.602	27.386	.216	27.454	27.670	27.522	.148	27.428	27.658	27.342	.316	27.448	27.716	27.372	.344
1865	27.388			.227	27.486			.248	27.435			.208	27.444	27.612	27.306	.306
1866	27.351	27.572	27.396	.176	27.437	27.622	27.432	.190	27.427	27.648	27.322	.326	27.468	27.677	27.392	.285
1867	27.354	27.586	27.372	.214	27.447	27.658	27.472	.186	27.476	27.742	27.362	.380	27.402	27.722	27.210	.482
1868	27.394	27.567	27.432	.135	27.457	27.692	27.477	.215	27.459	27.706	27.356	.350	27.473	27.770	27.182	.588
1869	27.368	27.566	27.362	.204	27.505	27.722	27.501	.218	27.499	27.746	27.420	.326	27.523	27.758	27.364	.394
1870	27.401	27.612	27.342	.270	27.447	27.622	27.342	.280	27.543	27.800	27.456	.344	27.492	27.712	27.362	.350
1871	27.373	27.542	27.372	.170	27.403	27.622	27.412	.210	27.461	27.672	27.452	.220	27.483	27.712	27.318	.394
1872	27.350	27.540	27.374	.166	27.441	27.656	27.452	.204	27.464	27.720	27.404	.316	27.470	27.732	27.150	.582
1873	27.378	27.600	27.422	.178	27.456	27.632	27.440	.192	27.432	27.658	27.334	.324	27.467	27.722	27.120	.602
1874	27.385	27.668	27.430	.238	27.457	27.650	27.472	.178	27.458	27.662	27.322	.340	27.490	27.708	27.340	.368
1875	27.409	27.602	27.404	.198	27.452	27.668	27.372	.296	27.428	27.652	27.322	.330	27.471	27.710	27.442	.268
1876	27.383	27.610	27.392	.218	27.427	27.618	27.442	.176	27.449	27.672	27.372	.300	27.511	27.692	27.312	.380
1877	27.420	27.642	27.436	.206	27.450	27.716	27.406	.310	27.452	27.658	27.372	.286	27.453	27.686	27.280	.406
1878	27.322	27.542	27.302	.240	27.425	27.622	27.434	.188	27.539	27.722	27.512	.210	27.523	27.708	27.394	.314
1879	27.385	27.580	27.410	.170	27.480	27.690	27.466	.224	27.493	27.672	27.452	.220	27.459	27.816	27.242	.574
1880	27.398	27.594	27.412	.182	27.488	27.702	27.478	.224	27.493	27.706	27.340	.366	27.426	27.690	27.290	.400
1881	27.374	27.584	27.364	.220	27.456	27.650	27.484	.166	27.441	27.662	27.322	.340	27.451	27.770	27.342	.428
Mean height reduced to 32°	27.388				..	27.462	..		..	27.470	..		..	27.465		
Mean of all highest	..	27.579			..	27.649	..		..	27.685	..		..	27.709		
Mean of all lowest	..	27.386			..	27.438	..		..	27.384	..		..	27.291		
Mean monthly range	..	194			..	.212	..		..	.296	..		..	.417		

TABLE XII.—Showing the mean height, maximum and minimum height, and annual range of barometer during 21 years. Obs. at 9 a.m.

Years.	Mean height reduced to 32°.	Highest in the year.	Lowest in the year.	Yearly range.
1861	27·443	27·782	27·127	·655
1862	27·438	27·782	27·150	·632
1863	27·439	27·672	26·972	·700
1864	27·367	27·722	27·110	·612
1865	27·392	27·660	26·972	·688
1866	27·379	27·740	27·200	·540
1867	27·380	27·742	27·172	·570
1868	27·386	27·772	27·182	·590
1869	27·410	27·772	27·202	·570
1870	27·405	27·800	27·110	·690
1871	27·388	27·772	27·246	·526
1872	27·389	27·732	27·150	·582
1873	27·393	27·770	27·112	·658
1874	27·394	27·772	27·072	·700
1875	27·388	27·710	27·082	·628
1876	27·401	27·772	27·030	·742
1877	27·413	27·730	27·122	·608
1878	27·385	27·740	27·212	·528
1879	27·400	27·816	27·154	·662
1880	27·396	27·754	27·156	·598
1881	27·389	27·770	27·097	·673
21 years ..	27·398	27·816	26·972	·844

Mean annual range, ·626

TABLE XIII.—Showing mean height of barometer, reduced to 32°, at 9 a.m. during the several months of the year, and the monthly range. Mean of 21 years.

Months.	Barometer reduced to 32°.	Monthly range.
January	27·465	·475
February	27·437	·453
March	27·382	·408
April	27·351	·362
May	27·397	·260
June	27·359	·227
July	27·285	·182
August	27·295	·185
September	27·388	·194
October	27·462	·212
November	27·470	·296
December	27·465	·417
Year	27·396	·305

TABLE XIV.—Showing the maximum and minimum temperature, mean temperature, mean monthly and daily range, &c., during the several months of the year. Mean of 8 years.

Months.	Highest in the period.	Lowest in the period.	Mean monthly range.	Mean daily range.	Mean Temper- ature.	Hygrometer.		
						Dry bulb mean 9 a.m.	Wet bulb mean 9 a.m.	Difference.
January ..	74·8	25·0	31·6	13·0	48·4	48·4	44·5	3·9
February..	79·0	30·0	32·9	13·4	47·9	48·5	44·3	4·2
March ..	88·0	33·9	42·0	16·9	55·7	57·8	50·5	7·3
April ..	86·0	30·6	44·6	18·7	58·4	61·1	52·3	8·8
May ..	103·0	43·0	49·8	23·1	69·3	73·4	59·1	14·3
June ..	103·5	47·8	44·0	22·5	72·8	77·6	63·0	14·6
July ..	98·2	49·0	37·3	23·1	73·8	78·4	65·4	13·0
August ..	101·0	61·3	38·0	23·6	76·1	79·5	65·7	13·8
September	100·0	42·0	41·4	24·1	71·5	74·9	64·0	10·9
October ..	96·5	32·0	44·8	23·6	68·6	73·0	60·8	12·2
November	89·2	34·5	41·5	18·7	59·9	61·6	54·2	6·4
December	73·6	36·8	31·0	13·9	51·4	52·0	47·3	4·7
			39·9	19·5	62·8	65·5	55·9	9·6

TABLE XV.—Showing the number of days on which the wind blew from certain directions during the several months of the year at 9 a.m. Mean of sixteen years.

Months.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
January ..	1·25	5·00	5·25	2·00	1·62	6·00	4·68	5·18
February..	1·12	2·75	4·18	2·37	1·43	5·93	4·43	6·00
March ..	1·25	2·25	3·87	4·31	1·25	6·06	5·81	6·18
April ..	2·43	1·50	3·75	4·81	1·37	4·68	4·62	6·81
May ..	4·18	3·18	3·12	4·12	0·68	2·00	3·68	10·00
June ..	4·25	1·87	1·50	1·62	0·50	3·00	4·18	13·06
July ..	3·00	0·81	0·31	0·37	0·31	1·87	6·31	17·93
August ..	3·81	1·37	0·37	0·50	0·56	2·62	6·18	15·56
September	6·62	1·87	1·18	0·68	0·75	1·18	4·68	13·00
October ..	4·62	3·75	4·62	2·93	0·75	2·62	2·43	9·25
November	2·50	5·06	6·56	1·81	0·68	4·18	3·93	5·25
December	1·25	3·31	5·50	3·12	1·93	6·31	4·06	5·50
Year ..	36·28	32·72	40·21	28·64	11·83	46·45	54·99	113·72

TABLE XVI.—Showing the mean force of the wind at 9 a.m. and the mean number of calm days in each month. Mean of 10 years.

Months.	Mean force of wind at 9 a.m. 0—6	Mean number of calm days at 9 a.m.
January	0·47	10·7
February.. ..	0·67	7·6
March	0·65	5·9
April	0·63	6·5
May	0·49	6·8
June	0·41	8·3
July	0·40	7·3
August	0·32	9·1
September ..	0·33	10·3
October	0·27	12·3
November ..	0·41	11·5
December ..	0·50	11·7
Year	0·46	108·0

TABLE XVII.—Showing the mean amount of cloud and the mean number of cloudless days at 9 a.m. in the several months of the year. Mean of 16 years.

Months.	Mean amount of cloud. 0—10	Mean number of cloudless days.
January	4·4	6·8
February.. ..	4·8	5·1
March	5·0	5·5
April	3·7	8·9
May	2·4	11·8
June	1·1	18·5
July	0·6	21·5
August	0·9	18·0
September ..	1·2	17·5
October	2·3	12·2
November ..	3·5	8·0
December ..	4·6	6·7
Year	2·8	140·0

LIFE, HABITS, AND CUSTOMS OF THE FELLAHIN OF PALESTINE.

By the Rev. F. A. KLEIN.

(From the "Zeitschrift" of the German Palestine Exploration Society.)

Before giving a slight sketch of the Fellahin method of agriculture, it will be as well to describe the present state of the Land Tenure. It is of three kinds :—

I. *Ard miri*,¹ or taxed Crown land.

In this class are included nearly all the large and fruitful plains like those of Jaffa, Ramleh, and Esdraelon. These lands are leased by the government to various individuals, or sometimes to a whole village. The lessee pays a tenth of the produce of the soil for his right of cultivation. *Miri* land, therefore, cannot be sold by the lessee, nor has he the power to transfer it ; he merely possesses the right of cultivation for a given time, and this only holds good during the lifetime of the lessor. In the event of his death, the contract he has made becomes null and void, even though its term be not expired.

The *muzāra'a* descends to his children. Should he not have any, it goes to his brothers or sisters or their descendants, and failing them, to his father or uncles and cousins on the paternal side. In the case of a man possessing none of the above-mentioned relations, the *muzāra'a* reverts to the State. A few years ago a large piece of land, in the plain of Jezreel, fell in in this manner, and was sold by the government to the firm of Sursuk in Beirut.

II. *Ard wakāf*, or glebe-land, is land which has been left to the Mosques and Holy Places, or for the maintenance of schools and religious institutions. Rich tracts of such land are owned by the Mosque of Omar, the Neby Daud sepulchre, and the Mosque in Hebron. These lands cannot be sold, but only leased. The lessees are responsible, not to the government, but to the *mutaweli* or bailiff, who retains a share of the tithes for himself. By this means many poor Effendi families obtain an income. Great abuses have crept into the management of the *wakāf*, and there is only too much foundation for the complaint that the Effendis "eat up" and misappropriate the revenues.

III. *Ard mulk*, or freehold, is chiefly composed of small pieces of ground in the neighbourhood of the villages, such as fig and olive plantations, gardens, and vineyards. These are generally enclosed by mud walls or cactus hedges. The proprietor is, of course, free to sell them if he thinks fit, or, as it often happens, to exchange² them for other *mulk* lands. Hitherto the title-deeds of these lands have been drawn up by a writer in

¹ Shortened form of *ard emiri*—land of the Emir.

² *Badal*—exchange; *baya*—sale.

the village, and provided they had the necessary names of witnesses and the proper seals, the owner's right was not disputed. Lately, however, the Turkish government has been trying to get even the *mulk* under its control.

In some parts of Palestine there is a good deal of *ard bawr*, or fallow land. This is due partly to the scantiness of the population, and partly to the prevailing poverty and indolence. There is not much in the fertile valleys, but in the hilly districts some of the land only bears a thin crop of grass in the spring-time, which forms but scanty pasturage for the cattle. The *bellān*, a kind of thorny shrub, also grows on this poor sort of land. It is collected in large quantities by the charcoal-burners, and when burnt with *jift*¹ it gives a tremendous heat and is valuable for fuel. Sometimes the dry grass and herbage on such land is set on fire, and the hill, by this means, is slightly manured,² but manure does not enter into the farming operations of the Fellahin. Both the supply and the means of transport are wanting, so it is only used in the gardens and occasionally in the olive and fig plantations.

Ard majamid (dead land) is land which has not been under cultivation for many years. If reclaimed, it becomes the *mulk* of the reclamer. In Nazareth I have seen many good vineyards which the owners had obtained in this manner, through cultivation.

Arādi majhule (unknown land) is deserted land which has been left vacant either by the death of the owner, or by his sudden departure, which not unfrequently occurs in the event of his being in debt, or much behind-hand with the taxes. Such land falls to the Crown according to the class to which it originally belonged.

Nothing affects the agriculture of a country so much as the climate. In Palestine the year is really divided into two parts—the dry season and the rainy season. As a rule, the rainy season lasts from the middle of October until about the end of April, and the dry season the rest of the year, but sometimes the rains do not commence until November or December. These months and January are generally very wet, and rain will fall almost incessantly for a week at a time. The late rains fall in March and April, but from May the vegetation depends for moisture on the dampness of the earth and the heavy night dew (*nada'*). During six months not a drop of rain ever falls, save in a very exceptional year. The Fellahin, like ourselves, divide their year into four seasons, *rabia'*, *sayf*, *kharif*, and *shita*—spring, summer, autumn, and winter. The spring begins in February, which is much the same as our April, an uncertain, showery month; still, according to the Fellahin saying, February “blows with the breath of summer.” March is called the month of earthquakes and storms, but “the shepherd can dry himself without fire,” namely, in the warm sun. The late rains are considered so precious that there is a saying to the effect that April rain does more good than the plough and the oxen. In July the heat becomes excessive.

¹ The remains of the olives after the oil has been pressed out.

Sometimes as early as October, but oftener about the beginning of December, when the rains have softened the cracked and burnt-up earth, the Fellah puts in the winter seed, wheat, barley, and lentils. The earth is broken up with a most primitive plough, in fact, the surface of the ground is scratched up rather than turned, the furrow never being deep. The plough is drawn by a yoke of oxen, or an ox and an ass, and sometimes by a camel, but very rarely by a horse. The ploughman urges on the animals with a long staff furnished with an iron point; this he also uses for breaking up the clods of earth. Except in the case of young animals not used to the plough, the progress is very slow. When the animals are their own, or if they happen to be ploughing for someone else, the Fellah does not hurry them. The plougher will often pass over deeply-rooted thorns rather than take the trouble to press more heavily on the plough. Where, from the rocky nature of the ground, or from a thick growth of thorns, the ploughing is very difficult, a sort of pickaxe or hatchet is also used. Many bits of stony ground, especially amongst the mountains, are only picked up, and light ground which can be worked without being moistened is sometimes merely sown. In such ground the seed springs up directly after the rain and yields an early crop. But in the absence of rain, seed thus sown is often lost. The putting in of the winter crops often lasts till January; it is slow work, for some of the people have to travel with their oxen a two or three hours' journey before reaching their land, and have to return again in the evening. The winter crops are succeeded by the summer crops of dura and sesam, which grow in the dry season. A season of heavy rains is always followed by an abundant harvest, for the moisture sinks deep into the earth, and is, so to speak, stored up. Tobacco, cotton, cucumbers, and melons are also grown in the summer. They are planted after the rains, and ripen during the hot months, the heavy night dew aiding their growth.

It has been already mentioned that by far the greater part of the cultivated land is not private, but government property, either *miri* or *wakûf*, and that the cultivator is merely the holder. Each district has certain tracts of such lands, and after the rains they are let to the different inhabitants in separate plots. The division is decided by lottery. Herr Schick has given an account of the manner in which this lottery takes place. All those who are desirous of land assemble in the *sâha* (an open place generally in front of the inns). The Imam, or *khatib*, who is writer, accountant, and general archivist to the whole village, presides over this meeting. The would-be cultivators notify how many ploughs they can muster. If a man has only a half-share in one, he joins another man with a like share. Then the whole number is divided into classes. Supposing the total number of ploughs to be forty, these would be divided into four classes of ten, and each class would choose a Sheikh to represent them. The land of course varies in quality, and this division into classes makes the distribution simpler. Say, they are four classes, the land is divided into four equal portions, so that each class may have good as well as bad. When the Sheikhs have agreed that the division is fair, the lots are drawn.

Each of the sheikhs put some little thing into the *khatib's* bag. Then the *khatib* calls out the name of one of the divisions, and some passing child is made to draw out one of the things from the bag, and to whichever Sheikh it belongs, to his class belongs the division named by the *khatib*. This decided, the Sheikhs have to determine the individual distribution of the land. In the case of ten ploughs to a class, they do not each receive a tenth piece of the whole, but, in order to make it as fair as possible, the land is divided into strips, so that each portion consists of a collection of strips in different parts of the village lands. The boundaries are marked by furrows or stones, and to move a neighbour's landmark is still accounted an "accursed deed," as in the days of ancient Israel (Deut. xix, 4).

The harvest begins as early as the middle of April or the beginning of May in the valleys, but later in the mountains. In the wide-spreading plains of Gaza, Esdraelon, and Jaffa, the reaping and transport of grain employs many hands, and attracts numbers of poorer Fellahin from their own villages to act as reapers, whilst many poor widows go with their children to glean. Every evening these latter thresh their gleanings with a stone or a piece of wood. I have often known poor women, who, after a few weeks' gleaning, returned home with enough grain to carry them through the whole year. The reapers generally wear a leathern apron to protect their chest and legs. The grain is cut down with a *manjal*, or sickle, but not very close to the ground. As soon as he has an armful, the reaper binds it into a shock, and throws it on one side. These shocks are collected into bundles and carried by donkeys or camels to the threshing-floor. In spite of the great heat, the work of harvesting is always done cheerfully, and the song of the men and the shrill *zagharit* of the women may often be heard floating over the hills and valleys.

The threshing-floor is a flat place in the neighbourhood of the village. If possible, a rocky place is chosen, so that it may be easily swept. Where this is not obtainable, a hard, flat piece of ground is made to answer the purpose. The floor is common property, but each thresher keeps to a certain part of it. For four months the Fellah has nothing to fear from rain or bad weather. During that time he almost lives at the *beiyâdir* (threshing-floor) and some of the villages are nearly deserted, at least by the men. The wheat, &c., is spread out, and the oxen and asses are driven round so many hours a-day to tread out the grain with their hoofs, at the same time treading and softening the straw so that it becomes fit for fodder. This straw is called *tîbn*, bundles of ordinary straw and stubble they call *kash*. The animals as a rule are not muzzled. Another method is the use of a weighty plank, into the under side of which are sunk a number of small bits of basalt stone, forming kind of teeth. This instrument, called a *môrej*, and made somewhat in the fashion of a sledge, is drawn by a horse over the heap of unthreshed barley or wheat, and crushes out the grain partly by its weight, for the driver sits upon it, and partly by the sharp teeth which tear the corn. The grain being separated from the straw, the work of winnowing begins. This must be done whenever there is a gentle breeze, for with too much or too little wind it is

equally impossible. The threshed grain is tossed with a three-pronged wooden fork ; the wind scatters the chaff to a distance, and carries away the dust. The grain is next collected into large heaps, and arranged in certain ways so that it cannot be disturbed without the knowledge of the owner. Besides this, the floors are constantly watched, and at night the owners generally sleep beside their grain. Great care is taken to guard against fire ; a really destructive one is of very rare occurrence. From the grain thus stored the *'ashr*, or tithes, are assessed and are paid direct to the government or to the *wakûf*. The extortion and oppression which results from this system is but too well known.

Very often a portion of a peasant's harvest is due to some townsman from whom he has borrowed money, and this is always claimed after the threshing, excepting when the negligence of the lender, or some stratagem on the part of the borrower, delays the evil day. The Fellah finds it very easy to borrow money, but thinks it very hard to be obliged to pay it back. If a ploughman has been employed, he now receives what is due to him. The *khatib*, too, has his reward. This worthy not unfrequently acts in the capacity of village barber. In short, when the Fellah requires anything, and has no money, he puts off payment until the "time of threshing," and then everyone seeks as speedily as possible the settlement of their claims. Dervishes, poor priests, the blind, and the lepers all make a pilgrimage to the *bedar*, and seldom leave it empty-handed. Many a small peasant, after he has settled the numerous just and unjust claims on his produce, has scarcely enough grain left to carry on his family until the next harvest, and many, after a few months, have again to borrow money in the city on the same security. The well-to-do Fellah carries his grain away in sacks on donkeys or camels, and sells what he does not want at the corn-market. Sometimes it is carried long distances. Every year lines of grain-laden camels are driven from Hauran to Nâblus and Jerusalem. A great deal is also bought up by brokers and sent to Jaffa, Haifa, and Akka. The rest of the grain is stored in magazines, dry rooms or underground granaries ; and the straw kept for the cattle is also stored in dry places, very often in caves in the rocks. On an average the crop shows a return of six-fold the amount sown ; twelve-fold is considered very good, but the sixty or a hundred-fold of the New Testament is not yielded in the present day.

The measure by which the Fellahin divide their land is the *feddân*. It is decided by the amount which a man with a yoke of oxen can plough per day, and is therefore a most uncertain measure.

Besides the cultivation of grain, which forms the chief employment of the people dwelling in the great plains, the care of the vineyards, and the fig and olive plantations, takes a good deal of time and attention.

Vines are generally planted in the hilly districts, the slopes and natural terraces being well suited for them, whilst such rocky land is useless for cultivating grain. Many of the villages own fine vineyards, some near, some at a distance, but unluckily large tracts of land, well suited for the purpose, and apparently used for it in former times, now lie uncultivated.

The vineyards are enclosed by stone walls or cactus hedges. With the somewhat too plentiful supply of stones, artificial terraces are made on which the vine can climb and hang over. In some places the vines are allowed to trail on the ground, as in Nazareth and Ramleh ; in others they are trained upright, as in Kolonia and Abu Ghosh, near Jerusalem. A watch-tower is built in the vineyards, generally of large stones without mortar, and on the top of it is a little hut roofed with branches. From this coign of vantage the vineyard can be overlooked and watched ; near it there is often an arbour formed of rough tree stems, and covered with vines. There are no wine-presses. The Fellah does not understand the art of making wine, and the majority of them being Mussulmans, they dare not attempt it. In many of the vineyards the old wine-presses of the Canaanites and Hebrews are still to be found in the form of two basins hewn in the rock, one into which the grapes were pressed, the other, on rather a lower level, for the juice to run into, by means of a connecting channel.

The Fellahin of Bethlehem and Beit Jala certainly attempt to make wine, but as they neither understand the process nor have any means of keeping it when made, the result is very poor stuff. The work in the vineyards consists in hoeing and breaking up the ground several times after the rains, and in pruning the vines. Bits of rock are carefully taken out of the ground, but beyond this the Fellah bestows but little pains on his vineyard. A newly planted vineyard will bear fruit in three years. All kinds of fruit trees as well as vines are planted in the vineyards—fig-trees, pomegranate, apple, pear, apricot, peach, quince, and mulberry trees. Directly the fruit is of any size the owner's family watch over it, and as soon as it becomes eatable they take up their abode at the vineyard, and remain there until it is all over. Everyone tries to pass some weeks or months during the hot unwholesome summer in a vineyard. Those who do not possess one hire a portion of one, and the well-to-do townsman counts himself lucky if he can camp out with his wife and children in a vineyard, living in a tent or a booth. Few noble families seeking change of air and scene at Ems or Kissengen are as happy as the Arabs under the shade of their fig-trees. A greater part of the daily food of the family then consists of bread and fruit. At this time of year many of the poorest people about Lydda and Jaffa subsist almost entirely on *sabr* and a little bread. The grapes which have not been consumed are carried in boxes or baskets to the next market, or to villages which have no vineyards. At these latter they are often exchanged for grain, the people being usually employed in threshing. Hebron is celebrated for its grapes, and so also is Es Salt, on the other side of Jordan, from whence come the much-prized "Cibeben."

In some neighbourhoods, instead of vineyards there are fig-gardens. The district around Bethel, and as far as the beginning of the Nâblus valley, is famed for them. A good portion of the figs (*tîn*), of which there are various sorts, are eaten when ripe, but the greater portion of them are dried in the sun and kept for winter consumption. To lay in a sufficient

quantity of dried figs is an essential part of the provisioning of a well-ordered Fellahin household. Dried figs are also used for producing spirit. The fig-gardens are sometimes dug up or hoed, but no further attention is paid them.

The finest plantations of olives are in the Nâblus district, but nearly every village has its larger or smaller grove. There is no doubt that the olive-tree is one of the most valuable products of the country, and that it could be made a still greater source of revenue than it is at present. It requires but little attention, and lives and yields fruit even when neglected. It only requires grafting and a little digging up and clearing out, and this done, it yields a plentiful crop in return for the small amount of pains bestowed upon it. The Fellahin say that the vine is a *sitt*, a delicate town lady who requires a great deal of care and attention; the fig, on the contrary, is a *fellaha*, a strong country woman who can flourish without such tender care, but the olive-tree is a bold *bedawije*, who, in spite of neglect and hardship, remains a strong and useful Arab-wife.

The olives ripen towards the end of the summer; the trees are then beaten with long sticks, care being taken not to destroy the young leaves and shoots. The fruit is collected and spread out on the roofs, or somewhere, and then put into heaps for a little while in order that it may slightly ferment, after which it is taken to the oil-press, where it is crushed under a heavy millstone and, packed in little straw baskets, is finally pressed. The oil (*zayt*) runs into a little cemented cistern, from which it is drawn in leathern bottles or large earthenware jars for carrying away. The Fellah uses it both for light and nourishment. If he has nothing better, he is content to eat some bread soaked in oil. It is also used a great deal in the town cookery, but as a means of light it has been almost superseded by petroleum. A great deal of inferior olive oil is used for making soap, and some years a great deal of oil is exported to France and Italy. The *jift*, or refuse of the olives, is used for fuel, having great properties of heat.

With regard to vegetables, their cultivation is only successful where irrigation is possible, though there are a few kinds which will grow without such, as gherkins, vegetable marrows, and tomatoes. Those which will grow dry are called *ba'l*, those which require water, *sakî*. In irrigated gardens all sorts of vegetables are planted, cabbages, turnips, pepper plants, radishes, egg plants, and sugar peas. If the water for several gardens is supplied by one spring, a fixed time is arranged for each owner to turn the water in his channel on to his land. The fruitfulness of the land when irrigated is really astonishing.

In cattle breeding the Fellahin are not successful. The oxen and cows are under-sized, and are kept entirely for agricultural purposes; it is only when they are of no further use for work that they are sold to the butcher. Fattened cattle are unknown. Very few sheep are kept, and mutton, which is the favourite meat, is either obtained from the Bedawîn, or else it is brought from Kurdistan or Hedschaz. The Fellahin, however, keep a great number of goats; cheese is made of their milk, and also the *laben*,

of which the Arabs are so fond. Butter is but little made, and *samn*, a kind of ghee, is seldom used except by the Bedawin. The best time for dairy produce is in the spring, when the early herbage appears, but when this is dried up a bad time begins for the unlucky cattle. The goats fare best, for they are turned out in all weathers, and can often find food on the hills. When the season is very bad, they are given oil-cake made from sesam. Sheep, and even goats, have a hard struggle to subsist through the winter months, and many an animal dies a miserable death for want of proper nourishment and care. Oxen and cows are fed throughout the winter on *tibn*, or crushed straw. Living the hard life that he does himself, the Fellah can hardly be expected to take much care of his cattle. If one animal after another dies from want of care, it is the will of Allah, and he must submit. He bears it philosophically, and tries by cheating and deception to recover the loss.

A townsman once entrusted a Fellah in Siloah with a number of goats in which they were "to go halves," that is to say, that for the trouble and cost of maintaining the whole, half the goats and half their offspring were to become the property of the Fellah. This sort of partnership is often entered into in the case of a horse. After a time the townsman sent to inquire how the little flock was getting on, and received the joyful news—*walladen*—"they have kids." The townsman now hoped for a good supply of milk, but soon came the unwelcome intelligence—they are giving no milk—and a little later on came word that they were dead. Whether it was all true, or whether the Fellah had over-reached him, the townsman could never ascertain. In the spring and early summer, when there is good stubble-feeding for the cattle, the cowherd drives them to the fields every morning, and brings them back at night.

If, as it often happens in the colder districts, no grass is to be found, the larger cattle owners depart with their cattle to warmer lands near the Jordan Valley and winter there, living in the open by day, and taking shelter at night in the natural caves with which the country abounds.

And here I must close these notes on the rural economy of the Fellahin. To enter into fuller details would swell them from a paper into a volume.

THE NAMELESS CITY.

The position of the city where Saul met Samuel (1 Sam. ix) is without doubt the most perplexing question in Biblical topography. We seem to be hopelessly involved in the following dilemma : Saul, in walking from a city apparently *north* of Jerusalem to his destination also *north* of Jerusalem, passes Rachel's sepulchre, four miles *south* of it. How is this apparent contradiction to be satisfactorily explained ?

It is proposed to show (I) that the nameless city was certainly Ramah, where Samuel usually lived and was buried ; (II) that it was close to

Rachel's sepulchre, and therefore (so far as I can see) on the Beit Jâla hill ; and (III) that it was identical with Ramathaim-Zophim.

The chapter on the Bakoosh cottage in "Finn's Byeways" led me three years ago confidently to place the city two or three miles further south, near Solomon's pools. Further consideration demanded by Captain Conder's objections (1879, 171 ; 1880, 104), and especially by Lieutenant Mantell's careful report (1882, 165), apparently forces me to place it *at* or *near* Beit Jâla. It would, however, be well if the few seeming points of difference between that report and Mr. Finn's remarks could be fully explained.

The following points seem to me to admit of no dispute :—

1. Kubbet Rahil is practically the correct site of Rachel's sepulchre (1880, 241).
2. Saul's destination was either Gibeah, or possibly Jerusalem (1 Chron. viii, 32) or Zelah (2 Sam. xxi, 14) ; at any rate, it was north of the latitude of Rachel's sepulchre.
3. Saul *naturally, i.e., without going out of his way*, passed on his return near that sepulchre.

Common sense seems to insist on this last condition, and so we may reject off-hand all proposed sites that do not satisfy it. Accordingly, Dr. Robinson, after proposing Sôba, practically withdraws it on account of the circuitous route which Saul would have to take. More recently Mr. Henderson (1882, 63), supported by Captain Conder (157), would identify Kirjath-'Erma not only with Kirjath-Jearim but also with "the nameless city." Two fatal objections why Khirjath-'Erma could not be the former place remain as yet unanswered (61 ; against its being the latter, stands the irresistible condition 3. The Survey Map proves a very effective weapon against error, and gives the happy despatch to many wrong identifications, and not least to Kirjath-'Erma. For measurement shows the following results :—

From Kirjath-'Erma to Gibeah is about 11 miles.

" " " Rachel's sepulchre 8 "

" Rachel's sepulchre to Gibeah 8 "

It is absurd to suppose that Saul would travel along two sides of a triangle instead of the third, and that in going from Kirjath-'Erma to Gibeah (64) he would *go round* by Rachel's sepulchre, *south* of the latitude of Kirjath-'Erma.

"The nameless city" cannot have been to the north of the latitude of Rachel's sepulchre, and therefore it was not at either Bethel or Gilgal or Mizpah or Kirjath-Jearim, which has never (so far as I know) been placed at all to the south of Rachel's sepulchre. All such proposed sites stand condemned by condition 3.

1. The following points seem to indicate that the city was Ramah, while *e* settles the question decisively.

- a.* Josephus calls it Ramah. Formerly I thought his statement an "unlucky conjecture." Now I believe the story strictly requires it.

- b. Though Ramah is not named in ch. ix, x, it is met with in viii, 4, where the story begins.
- c. It is objected (1882, 63) that Samuel is not once spoken of as "dwelling" in the city. This omission, however, has no force, since Ahijah the Shilonite is not said to dwell at Shiloh (1 Kings xiv, 2, 4.)
- d. It is urged again (63) that the words (ix, 12, 13), "He came *to-day* to the city; for the people have a great sacrifice on the high place. . . . The people are not accustomed to eat till he comes, for he blesses the sacrifice," suggest that Samuel was only "therefore the occasion of the sacrificial feast."

The Speaker's Commentary, however, points out that "to-day" may only mean "now, just now." Samuel may quite recently have come into the city from the fields outside, or from out of his house. Further, it is hardly credible that Samuel had arrived at the city for the first time on that day, since it is stated (ix, 15), "The Lord had told Samuel a day before Saul came, saying, To-morrow about this time I will send thee a man out of the land of Benjamin." Surely, after this, to go to another city would be exactly what Samuel would *not* do.

- e. The conclusive point, however, is that Samuel's house was in the city (ix, 18), and so it is specially noted of Ramah in vii, 17, "There was his house." One who took no bribes, and lived in such retirement that he was not even by sight known to Saul, would certainly not have both an object and the means for keeping up, besides his home at Ramah, a second house and cook in another city quite distinct from the four holy places named above.

- f. Lastly, Ramah was a most suitable place (1882, 64) for a great sacrifice, for "there Samuel judged Israel, and there he built an altar unto the Lord" (vii, 17). I conclude, therefore, that the city certainly was Ramah, the dwelling-place of Samuel.

II. Its position was south of the latitude of Rachel's sepulchre. This seems at first sight to open a wide field. Jebel Fureidis has been suggested by Gesenius; Rameh, north of Hebron, by Lieutenant Van de Velde on account of the name. There are, however, too many hills and Ramahs in Southern Palestine for elevation and name to be of much use.

Perhaps the words in ix, 4, 5, may imply that the land of Zuph, and therefore the city, was *in* or *near* the land of the Benjamites. Again, on the third day towards evening, when their bread was spent, Saul and his servant came near the city, and the former proposed to return home. Probably there was time to reach it before dark. Happily there is no need to press these points, as the sacred narrative itself fixes the position of the city close to Rachel's sepulchre. It is stated in x, 2, "*When thou art departed from me to-day, then thou shalt find two men by Rachel's sepulchre.*" Mr. Henderson has for three years made the admission (though it really tells against his site at Kirjath-'Erma) that these words indicate (1879) "*that just on leaving Samuel, immediately therefore, Saul*

would be at that spot ;” and again, that (1882, 64) “the prophet anointed the king, *not far* from Rachel’s sepulchre.”

This witness is true. It is a mistake, however, to give Samuel several miles’ walk in the early morning, for the anointing took place not only not far from Rachel’s sepulchre, but also *close to the city* ; as they were going down to the end of the city, Samuel said to Saul, “. . . stand thou still. . . . Then Samuel took a vial of oil,” &c. (1 Sam. ix, 27 ; x, 1). Therefore the city itself was not far from Rachel’s sepulchre.

The place thus named Ramah, and situated near Rachel’s sepulchre, was further in “the land of Zuph.” It is a remarkable coincidence that Elkanah or one of his ancestors named Zuph was an Ephrathite, and so was connected with Bethlehem or Ephrath (1 Sam. i, 1) ; while the Kohathite Levites, to which family Zuph and Samuel belonged, had a very strong reason for being partial to the neighbourhood of Bethlehem. From this Zuph, part of the adjoining country may easily have got the name of “the land of Zuph.”

The existence of a Ramah near Bethlehem, which has thus been proved, completes the adaptation of Jer. xxxi, 15, to the slaughter of the Innocents (Matt. ii, 18) “in Bethlehem and in all the *coasts* thereof.” Then literally “In *Rama* was there a voice heard. . . . Rachel weeping for her children.”

We have now to search for a site not far from Rachel’s sepulchre which satisfies the local indications of 1 Sam. ix, x.

- (1.) There was an ascent to the city from the direction of Saul’s approach, down which apparently the maidens were going to draw water. On this side there must be a water supply.
- (2.) There was descent in the direction of the way towards Rachel’s sepulchre (ix, 27).
- (3.) There was higher ground adjoining—the site of the high place.
- (4.) There ought to be ancient Jewish tombs on the hill.
- (5.) Possibly we ought to find near it something answering to the great well in Sechu. Besides, we have the expression, “Naioth in Ramah.”

Is there any suitable place possessing these characteristics ? Bethlehem itself, which Captain Conder has now discarded for Kirjath-’Erma, was once (1879, 171) suggested by him. It is, however, inadmissible, since from Bethlehem Samuel (1 Sam. xvi, 13) returned to Ramah. The only hill that seems to me available is that of Beit Jâla, and this I believe to be the right spot.

To suit (1) there is a cistern on the northern side called Bîr Auna, and a spring and trough named Hand Kibryan on the south-west of the hill. From one of these sides Saul might have approached the city on this hill, and in both cases there is an ascent.

To suit (2) there is a descent from the hill in the direction of Rachel’s sepulchre.

To suit (3) there is higher ground behind the present village of Beit Jâla.

To suit (4) it may be stated that Captain Conder has suggested Beit Jâla as a possible site for Gallim.

It is probable, then, that old tombs have been already discovered there, or sufficient remains to prove that it is an ancient site.

I no longer stand in need of the argument I wished to draw from the identification of the places named by Samuel, with various spots within view, when he anointed Saul. I may state, however, that from the Beit Jâla hill Rachel's sepulchre is well in view; Jerusalem may also be seen, and probably the Mount of Olives, as well as the hill south of Jerusalem (1879, 130).

The sepulchres on the Bakoosh hill described by Lieutenant Mantell seem to me to point to the former existence of habitations close by, which must, I fear, always remain a *nameless* city.

III. Having proved that "the nameless city" was really Ramah, Samuel's ordinary residence, and that it was situated on the Beit Jâla hill, we now come to the difficult question how such a position can be reconciled with 1 Sam. i, 1, "There was a man of Ramathaim-Zophim, of Mount Ephraim, and his name was Elkanah . . . the son of Zuph, an Ephrathite."

The following explanations suggest themselves:—

1. Elkanah may have formerly lived in Ramathaim-Zophim, in Mount Ephraim, but removed to the Ramah near Bethlehem before Samuel was born.
2. He may have been living in Ramathaim-Zophim, in Mount Ephraim when Samuel was born, and afterwards he or Samuel may have removed to the other Ramah.
3. He may have been an inhabitant of Ramathaim-Zophim, but have lived originally in Mount Ephraim.
4. Mount Ephraim may have reached to Bethlehem.
5. Mount Ephron was the original reading, and, not being understood, was altered to the well known Mount Ephraim.
6. Mount Ephrath (as the name of the district near Bethlehem or Ephrata—like Mount Bethel near Bethel) was the original reading, and, being an unusual expression, was somehow changed into Mount Ephraim.

Of these, I reject 1–4 as quite inadmissible, though it is remarkable that, though Samuel was buried at Ramah, it is not added "in the sepulchre of his father," as is the case with most of the Judges; 5 and 6 alone seem to me credible, and I prefer 6, since all the change needed is to read ת for ד.

Dr. Robinson says that "Ramathaim-Zophim probably signifies nothing more than Ramah of the Zuphites or descendants of Zuph" in other words, Ramah in the land of Zuph.

A report by Lieutenant Mantell on the Beit Jâla hill (like those on the Bakoosh hill and Khurbet Adasah) would doubtless be most interesting and valuable.

August 1st, 1882.

W. F. BIRCH.

EMMAUS IDENTIFIED.

BY MRS. FINN.

AMONG the many questions of interest that occupied our attention while living in Jerusalem, there was none more attractive than this "Where was the Emmaus of St. Luke's Gospel?"

During the first ten years after our arrival in Palestine, we had sought the reply, but had found none that could be considered satisfactory, although various travellers and writers on the topography of Palestine had dealt on the question.

Dr. Robinson, successful as he had been beyond all that went before him in identifying long lost sites, had in this instance resorted to that refuge for distressed critics, "a different reading" of the sacred text, and suggested that St. Luke had originally written as to the distance of Emmaus from Jerusalem—not three score furlongs, but *one hundred* and three score furlongs. Dr. Robinson thought that this altered reading would allow of the Emmaus of St. Luke's Gospel being identified with the Emmaus afterwards called Nicopolis, on the Plain of Sharon, at the foot of the Judean mountains, twenty-two Roman miles distant from Jerusalem.

Is not Nicopolis rather 176 than 160 furlongs distant from Jerusalem?¹

In considering the matter on the spot, however, it appeared to us that very serious difficulties present themselves against the attempt to apply the narrative in St. Luke's Gospel to any place so far from Jerusalem as the Nicopolis-Emmaus.

First of all, the events occurred in Passover Week, which all devout Israelites spent at, if not in Jerusalem. Nicopolis-Emmaus is a distant place out of the hill country of Judah.

Secondly, a journey of twenty miles on foot up steep mountain passes, is altogether at variance with the circumstances under which the two disciples returned from Emmaus to Jerusalem that evening. On their arrival at the village, they had dissuaded our Lord from going further, because the day was "far spent" (declined). It was towards evening when at their entreaty he went in to tarry with them. Then came the evening meal, which according to the custom of the country is not commenced till at or after sunset. At Passover or Easter time, the sun sets soon after six o'clock, and there is but a short twilight in Palestine. When the disciples had discovered who their guest was, they "rose up that same hour" in their eagerness to communicate the glad

¹ Josephus also mentions an Emmaus at 60 furlongs from Jerusalem; but Dr. Robinson deals with that in the same way, and suggests "another reading" for Josephus also. Dr. Tregelles, in a letter to Dr. H. Bonar, shows clearly that the evidence of the best MSS. in favour of the revised reading of Luke xxiv, 13, is thoroughly preponderating, and decisive in favour of the 60 furlongs.—"Land of Promise," by H. Bonar, DD., p. 538.

tidings to the rest of the disciples. But it is highly improbable that they had to walk a distance of twenty miles up a continuous ascent of above 2,000 feet from the level of the plain to Jerusalem. Had they made such a journey as that, most of it steep climbing, they would not have reached Jerusalem much before midnight, and long after the time when Easterns go to rest. But on arriving they found the eleven still together. They also must have been at their sunset meal—the last for the day. But if it were 60 furlongs ($7\frac{1}{2}$ Roman miles), that distance could have been traversed within two hours. They arrived and told their wonderful history—and as they yet spake (Luke xxiv, 36), the Lord appeared to them, finding them still “at meat” (*ἀνακειμένοις*, Mark xvi, 14), and offered to share the scarce-finished meal: “have ye here any meat?” (food). They gave Him a piece of broiled fish and of an honeycomb, and He did eat before them, and then entered upon a conversation which could not have been a short one.

All this implies that the two disciples must have got back from Emmaus early in the night.

The word used by St. Luke in describing Emmaus being *κωμὴ*, “a village” or “hamlet,” would not be applied to the Emmaus-Nicopolis on the plain, which Josephus expressly calls a *city*, and which he declares to have been well fortified with strong walls and towers (*see* “Ant.,” xii, 7, 3; xiii, 1, 3; “Wars,” iii, 3, 5). Jews while keeping their Passover as these disciples were doing, would scarcely go to any other *city* than Jerusalem.

It seemed to us that the Emmaus of St. Luke’s Gospel must have been a country village within easy reach of Jerusalem, the walk to which would in no way interfere with the due observance of the great Paschal Festival.

All these considerations led us to continue our search for Emmaus within a circle of 60 furlongs around Jerusalem.

The only indications in the Bible are those referred to above, *i.e.*, the name “Emmaus,” the distance “60 furlongs;” and the size, “a village.” Josephus also mentions an Emmaus, a Roman colony, at 60 furlongs from Jerusalem, of which more hereafter.

And with regard to the name *Emmaus*, Josephus gave us a clue in its derivation and meaning, a clue of immense value. He mentions a third Emmaus, distinct from the Emmaus-Nicopolis on the plain, and from the Emmaus colony near Jerusalem.

In “Ant.,” xviii, 2, 3, when describing Tiberias at the Lake of Gennesaret, he says there are warm baths at a little distance in a village named Emmaus. In “Wars,” iv, 1, 3, he tells us that “Vespasian removed from Emmaus where he had pitched his camp before the city Tiberias,” and adds, “now Emmaus if it be interpreted may be rendered *a warm bath*, for therein is a spring of warm water useful for healing.”

This rendering of the word is undoubtedly correct, Emmaus being merely the Greek form of the Hebrew *חמַת* Hamath.

The place near to Tiberias, which Josephus calls Emmaus, is called

Hamath in Joshua xix, 35, and is to this day known by the Arabic equivalent word *Hammâm*, "hot baths."

The Syriac form of the word is *Amatha*, given by Eusebins and Jerome as the name of the hot springs at Godera (Um knis) which are also called *Hammâm* by the Arabs of the present day (*see also* Reland's "Palestine," pp. 30, 703, 755, 758).

The Emmaus-Nicopolis of the plain received its name from the fact that it also was remarkable for a fountain endued with virtue for healing man and beast, which is said to have been stopped up by Julian the Apostate. This fountain is mentioned by both Jewish and Christian writers (Reland, pp. 759, 760).¹

The etymology of the name Emmaus led us to the conclusion that wherever the Emmaus of St. Luke might be, there must also have existed hot baths, and the modern Arabic use of the term *Hammâm* as applied to baths generally, whether of natural hot springs, or of water artificially heated, led us further to the idea that St. Luke's Emmaus need not be a place of hot springs, but that it might possibly be a place where abundance of water had caused the establishment of artificial baths of some importance.

We convinced ourselves before long, that there is but one place within the circuit of 60 furlongs from Jerusalem, where there is a sufficiently copious spring of water for the supply of baths. That place is the pretty valley of Urtas, which is about $7\frac{1}{2}$ Roman miles or 60 furlongs from Jerusalem, south of Bethlehem.

The valley descends from the ancient Etham (the fountain of which still bears that name), and passes round the base of the Herodium (or "Frank" mountain, called by the natives *Jebel el Furaidis*) on its way towards the Dead Sea.

These two places, Etham and Herodium, are among those whose distance from Jerusalem are specified by Josephus. He tells us that Etham was 50 furlongs off ("Ant.," viii, 7, 3), and that Herodium was 60 furlongs off ("Ant.," xiv, 13, 9, and "Ant.," xv, 11, 4).

Urtas, village and spring, lie between the two, and the difference between the 50 furlongs' distance of Etham from Jerusalem, and the 60 furlongs of Urtas, may be easily accounted for by the difference of the road to Urtas, which winds considerably, or by the relative position of the two places—the one higher, the other lower in the same valley.

The actual *distance* of Urtas from Jerusalem well answers the requirements of St. Luke's narrative.

¹ At the date of our search, we had not the aid of the Dictionary of the Bible, in which we afterwards found the argument against Nicopolis ably summed up, or of the "Geographie du Talmud" of M. Adolphe Neubauer.

M. Neubauer has a note on Emmaus, on p. 100 of his valuable work, and at pp. 34-38, he defines Emmaus and Hamath as being the usual appellation for thermal baths.

The Bible dictionary says that Emmaus has yet to be identified.

Nothing is more delightful on a spring afternoon than the 7 miles' walk across the Plain of Rephaim, past Rachel's tomb and Bethlehem, to this charming spot, the most charming and the most accessible from Jerusalem in the whole district.

There is here the most copious perennial spring of water to be found anywhere within the required distance from the Holy City.

It never fails, but runs with a strong stream in summer as well as winter, and it is altogether distinct from the spring at Etham, or from the other springs that supply the pools in the valley above.

The village is small, but there are remains of ancient buildings, and, indeed, it is easy to see that a village must always have existed here on account of the beautiful spring of water, yet being so near the fortified city of Etham, this probably never was no more than a village, and thus would answer to the terms used by St. Luke and by Josephus as to the size of the Emmaus to which they refer.

Here, then, is a place which fulfils the important requirements as to distance, size, and supply of water for baths.

But the name Emmaus, and its Hebrew and Arabic equivalents, were wanting, and, above all, where were the baths.

It was several years before we discovered any traces of either the name or of the baths.

While waiting for some discovery that might settle that decisive point, we studied with ever increasing interest all that served to throw light upon the past history of Urtas.

And first as to the name "Urtas,"—which has no meaning in modern Syro-Arabic nor in Hebrew, but is believed to be comparatively modern, and only a corruption of the Latin *Hortus* (garden), given to it at a period when Latin was much used and spoken in and around Bethlehem, close by.

This carries us back at least to the days of St. Jerome, whose memory is still fresh among the Christians of Bethlehem. There within the precincts of the great Convent of the Nativity is still existing the chamber where Jerome made his translation of the Hebrew scriptures into Latin. The short mile of hill and dale from thence to the valley of Urtas must often have been traversed by him and his companions—Paula with her daughter and others.

In the life of Vigilantius we get glimpses of the rural delights around Bethlehem. The city of David was then as now supplied with pure water from living springs, by the ancient aqueduct which winding around the hill sides, passes from Urtas, through Bethlehem to the Temple at Jerusalem. We know that Jerome and the Latin speaking Christians of his day regarded Urtas as the site of the *Hortus conclusus*, the "garden inclosed" of Solomon (Song of Solomon iv, 12). Had any Hebrew or Syrian name for Urtas been extant in Jerome's day he would surely have found and preserved it.

But the identification with the gardens of Solomon is reasonable. The proximity of the place to Bethlehem would in itself lead us to search here for the royal gardens.

Josephus tells us that they were at Etham ; the name Etham survives to this day as the name of a spring of water at the head of the valley, Ain Aitân. And the ancient city of Etham was doubtless on the mountain beside the spring. From 2 Chronicles xi, 6, we learn that Etham was near Bethlehem and Tekoa, which agrees well with the position of Urtas.

After Urtas Tekoa (now Tekua) is the very next town to Bethlehem. The Septuagint have placed Etân or Aitân among the cities of Judah, Bethlehem, Fagor, &c., inserted by them in Joshua xv. Fagor (now Faghoor) is the next important place of ancient date south of Urtas an hour distant. Josephus tells us that Etham "is very pleasant in fine gardens. and abounding in rivulets of water." No place but the Urtas valley would be thus described. He speaks of the early morning drives of King Solomon in his chariot to this delightful retreat ; and Urtas is the only place to which an easy pleasant drive across the plain would be possible.

The Song of Solomon is full of allusions to the charms of this garden, with its waters, its fragrant hills, its vineyards, its paradise (ch. iv, 13, rendered "orchard") of pomegranates and pleasant fruits.

In all points the Urtas valley with its fruit gardens and vineyards on the mountains around, fully coincides with the descriptive touches in that song:

The word *paradise* gives us a further clue. No ordinary garden or orchard can be justly described by the word *paradise* ; but only such a one as was the garden of Eden ; watered by a network of streams *parted* (Gen. ii, 10, "from thence it was *parted*" בֵּית) from the fountain head, into refreshing rivulets that keep up perennial verdure and a succession of pleasant fruits upon trees growing by the rivers of waters alluded to in Psalm i, the imagery of which is probably derived from this very spot.

In Ecclesiastes (ch. ii, 5, 6) Solomon speaks of his paradise : "I made me gardens and paradises (orchards), I made me pools of water."

We find both in the Urtas valley. The pools, ascribed by ancient local tradition to Solomon, and still called by the very same word as that used in the Hebrew text, lie with the system of aqueducts in the head of the valley just below Etham ; while the word *paradise* lingers in the same valley below Urtas, as the native name for the Herodium, *Jebel el Furaidis*, "Mount of the little Paradise."

The aqueducts are still existing which were carried from the one to the other.

There can be no doubt that the "little Paradise," which gave the name thus traditionally preserved, was the Paradise which Josephus says Herod the Great formed around the newly-built fortress tomb, where the Edomite king was afterwards buried.

This Paradise of Herod was but a revival by him of the Royal Paradise belonging to the Great Solomon, whom it was his constant ambition to rival and to outdo in his kingdom, his magnificence and his buildings, including the Temple on Jericho—the palace on Zion and the country retreat here in the loveliest vale of Judah's royal inheritance.

The name Etham, which the valley formerly had from the city above, had in all probability been superseded after the days of Solomon by that of "Paradise," and the transition to that of Hortus = Urtas is now difficult to understand.

But still this gives no clue to the name of Emmaus having belonged to Urtas—although Urtas was clearly the only place where baths could have been maintained, and although Urtas was at the distance which Josephus gives as that of an Emmaus existing in his time.

We now turned our attention to what Josephus says about this Emmaus. It is not much, yet he alludes to three particulars in which his Emmaeus agrees with that of St. Luke's Gospel.

1. The name.
2. The distance—60 furlongs.
3. It was a place, or village,

χωριον, and therefore not the fortified city Emmaus-Nicopolis on the plain. But there is more than this to be got out of the notice of Josephus.

The position of Emmaus is indicated, and it is described as having been chosen for a Roman settlement of military colonists, 800 strong.

Jerusalem had fallen. Vespasian and Titus had returned to Rome. Lucilius Bassus was Legate in Judæa.

The regular army had already been sent into other countries, excepting the 10th Legion, and some companies of horse and foot. The commander had attacked that citadel, which was in Herodium, Jebel Furaidis in the Urtas valley, and having taken it, he reduced Macherus, east of Jordan, which was then the most important fortress left in Jewish hands.

That taken, there remained but one stronghold, that of Masada, on the western cliffs, a few hours from Herodium on the way towards it (*see* Josephus, "Ant.," xiv, 13, 9).

Masada was seemingly impregnable, and it was in the hands of a powerful and desperate body of infuriate Jews, whom the Romans were resolved to subdue.

It was about this time that Cæsar had ordered the lands of Judæa to be put up for sale, *all but one place*, which he "ordered to be reserved" for 800 men, whom he had dismissed from his army—which he gave them for habitation—it is called Emmaus, and is distant from Jerusalem three-score furlongs." ("Wars," vii, 6, 6.)

This place then must have combined advantages for colonial settlement with those of a central position among the mountain fastnesses, whence the Arabian and other tribes might be held in check, as well as the Jewish garrison at Musada.

What place so likely to attract the sagacious Romans as Urtas, with its copious supply of water from perennial springs, its rich soil, its admirable military position among the mountains with regard to Jerusalem, and to all the eastern and southern tribes—in the same valley as the Herodium (but just captured), and so near Musada as to prevent any hostile movement on part of the Jews in that fortress.

The Imperial Emmaus colony may well have been posted at Urtas—and the name Hirtus may possibly date from the occupation by these Roman soldiers, who would not easily abandon so fertile a spot when once they had it in possession—and after the Roman troops were withdrawn, the Latin speaking people at Bethlehem would naturally preserve the Latin name.

The present Fellaheen, who are so tenacious in the preservation of ancient Shemitic names, could give us no other name than Urtas, which has been used by them from time immemorial, but which has no meaning in their tongue. This fact alone points to the conclusion that this race did not directly succeed to the original Jewish owners, but that a Latin speaking colony had intervened for at least a temporary settlement.

Otherwise the ancient name would be still in use, as in so many hundreds of places where the Fellaheen have preserved them.

Nablous (Neapolis) for Shechem, and Sebastieh (Sebaste) for Samaria, are instances of Greek names which have in this manner supplanted older Hebrew names.

Urtas for Hirtus would be one more instance of similar change where an occupation of foreigners came between the ancient and the present possessors.

Not only are the position and character of the Urtas valley suitable for a Roman settlement, but in the village there are actual remains of a strong stone building, possibly a small fort. The character of the masonry points to the Roman age. Further down the valley there are remains of similar style, and massive masonry which the Fellaheen call "the Mills."

There is an instance at Kotonieh (the first station on the road to Jaffa, west of Jerusalem) of a Roman fort built like this in a commanding situation in a valley instead of on a height.

Kotonieh is acknowledged to have derived its present name from a Roman colonia, or military colony stationed there. Though also a watered valley, the position is not likely to have been the one chosen by the Roman Emperor for his Emmaus settlement, for it would have been altogether useless on this western side as a check on the eastern fortress of Musada, or on the mountain district in general, being too much off the upper plateau of highlands.

Having so far identified the Urtas valley with the Etham where Solomon had his gardens and paradise, and Herod the Great his paradise around the Herodium, and also as a suitable place for the Emmaus military colony, the *name* Emmaus still remained a difficulty.

Why should the Etham of early Jewish history have become Emmaus in Roman times?

And where were "the baths," which alone could have justified the name Emmaus?

The following circumstances led to the recovery of these missing links: the name Hammâm, which in Syro-Arabic represents the Greek Emmaus, and the ruins of sumptuous Roman baths.

In 1847 the rich soil and streams of living water in the Urtas valley, then deserted and desolate, had attracted the attention of John Meshullam, a British subject of Jewish birth. He sought and obtained the protection and assistance of the then British Consul (my husband), Mr. Finn, in establishing himself there upon lands leased from the Fellah proprietors. By the year 1856, a considerable part of the valley had been planted and restored to a condition of fertility and beauty. In that year I joined him in taking under cultivation a fresh tract, further down the valley.

Gardens and orchards, in fact "paradises," irrigated by streams from the fountain head, were once more formed in the valley-bed as of old.

At one part, however, progress was arrested, the ground could not be cleared as elsewhere, for planting; it was fully occupied beneath the surface by remains of buildings hitherto concealed by about 20 inches of soil, evidently washed down from above in course of ages. We had noticed before that when the stream of water reached this spot, it used to disappear as if into a chamber of some kind.

Early in 1857, in digging for the foundations of a retaining wall for a garden plot, we once more came upon these remains, and found excellent hewn stone lying loose from some former building, also a fragment of cornice, pieces of a stone door with a place for the bolt, a few copper coins (one of Constantine, the rest Cufic), and a small bit of glass mosaic.

What was our delight when, as we stood there watching the Fellah workmen, we caught from their lips the word "Hammâm," "baths."

"Hammâm!" we cried, "where is the Hammâm?" "Oh!" replied one standing by, "the Fellaheen here *always* call this spot the place of the Hammâm, and yon rock jutting out into the path they call *Leeyet al Hammâm*, "the promontory of the baths."

At last, then, here was the missing link, the name *Emmaus*. But how make certain that the name had real value. Where were the baths?

Several years passed before funds for making excavations were forthcoming.

But one thing became clearer each succeeding year, that in no other place within 60 furlongs of Jerusalem was water sufficient for maintaining baths to be found excepting at Urtas only.

At last, in 1861, Mr. Cyril Graham, whose discoveries east of Jordan had already cast so much light upon the literal accuracy of Holy Scripture, joined us in commencing diggings at the so-called Hammâm in Urtas.

Just before we began, there were dug up in a field adjoining that spot, two Corinthian capitals of extremely pure style, and a fragment of cornice, all of native limestone. This quickened our zeal. We set to work, and the very first thing that came to light, only a few feet below the surface, was a *bath*! lined with purest white marble in perfect preservation, 4 feet long by 3 feet 7 inches wide, and 3 feet 9 inches deep, having in it a step or seat for convenience of the bather.

The marble is foreign, apparently from Greece.

In this bath were found two bronze strigiles, or bath scrapers similar

to those found in the baths at Pompei. Also large quantities of coloured and gilt glass mosaics like those of Pompei, and those which ornament the dome of the rock on Moriah, the Churches of the Holy Sepulchre, and of the Nativity, and St. Sophia at Constantinople.

Next to this bath, we found another bath or tank, 23 feet by 18 feet, and $4\frac{1}{2}$ feet deep. The cement still remains in considerable quantity on the floor and sides. We then found, at a higher level, above the marble bath, and communicating with it, another tank, 4 feet 4 inches long by 4 feet wide, and 4 feet deep.

In all of these were found glass mosaics ; in the largest there also lay a small fragment of a column of blue and white marble ; many pieces of thick greenish panes of glass, evidently window panes of the bath ; much white marble pavement ; one Jewish copper coin considerably worn ; several Cufic coins, and the ornamental hasp of a brass lock.

Higher again than the small tank, and communicating with it by a cylindrical bore through the massive stone wall, we next found a large pool (perhaps swimming bath), 51 feet wide, that is 30 cubits of 21 inches, by 8 feet deep. The length he could not then ascertain. It was quite filled with mould washed down in course of ages from the higher ground.

In this pool we found still more proofs of the costly and magnificent character of these baths. Buried in the earth, there lay the shaft of a column, 8 feet 8 inches long, and 3 feet 11 inches in circumference, also of pure white foreign marble ; and not far off three marble capitals of peculiar style, very richly and beautifully carved in a species of palm-leaf pattern, somewhat like Corinthian, and reminding us of the monolith at the Huldah Gate of the Temple on Moriah. The roof had doubtless been supported on pillars as in the baths of Caracalla at Rome.

Here were also fragments of very thin glass vessels and of ancient pottery ; bits of Roman tiles ; two little metal implements, apparently ear-picks ; a piece of a stylus of unknown material ; and fragments of marble pavement grooved so as to be bound together with metal clamps, which were still in some of the pieces.

There were a piece of an iron hinge, a rusty sickle, and a small bit of glass shaped like a solid trumpet (similar, as some one told us, to metal ones found at Pompei), also a fragment of glass, which bears on it marks of the casting process, such as one sees on glass cast nowadays. Cast glass has also been found in the baths at Pompei. The last, and perhaps the most interesting of the miscellaneous relics dug up, were small triangular pieces of black bituminous stone which had evidently been used in mosaic pavement.

This stone, found near the Dead Sea, is now used by the Bethlehemites for small ornamental cups, vases, &c. But Josephus tells us of the use to which it was put in the days of King Solomon, as pavement on the road which he laid for chariots from this very place, Etham.

“Now Solomon had divine sagacity in all things, and was very diligent and studious to have all things done after an elegant manner, so he did

not neglect the care of the ways, but he laid a causeway of *black stone* along the road that led to Jerusalem, which was the royal city--both to render them easy for travellers, and to manifest the grandeur of his riches and government" ("Ant.," viii, 7, 3, 4).

The marble lined bath when laid open to view at once struck our Jewish friends as similar in arrangement to the Mikoah, or bath used for ceremonial ablutions at the synagogue. And they argued that this was proof of the whole being the work of their great King Solomon. It is of course possible that Solomon may have added baths to the luxuries of his country paradise--though not of the Roman style.

But the foreign marbles, the style of the capitals, the glass and the pottery, led us rather to ascribe them to Herod the Great, whose extraordinary love of luxury is well known, and who would gladly adopt the custom which had newly come in with the reign of Augustus Cæsar of establishing magnificent Royal Thermæ. There was an unmistakable resemblance here to Roman baths. And Herod would naturally mingle Jewish arrangements with those which bespoke his Roman tastes. The only other sovereign by whom they might have been arranged was Constantine. But his residence at Jerusalem was too short for such an undertaking, and the baths must have existed before St. Luke and Josephus wrote about Emmaus, near Jerusalem.

Here, then, beyond all cavil or doubt, we had brought to light Emmaus, the Hammâm, the baths, at 60 furlongs from Jerusalem.

And it seems to me that while the accuracy of St. Luke and of Josephus are vindicated, we may easily account for the fact that Hamath, the purely Hebrew form of Emmaus, has not been recovered as attached to this spot. There are no natural *hot springs* here to deserve the name of Hamath. These are artificial Roman baths, just such as the proud luxurious Herod in his emulation of Cæsar, no less than of Solomon, would erect here at his little paradise and near his fortress at Herodium.¹ The Greek name Emmaus would naturally be used in those Greek speaking days for the little village, now that the ancient Etham higher up was no longer a strong city. As Emmaus only, not as Hamath, could it have been known to the writers of our Saviour's days. It was as such the creation of Herod. The mention of this place by this name by two writers of the Herodian period, St. Luke and Josephus, is one of those undesigned coincidences so invaluable in evidence.

This Emmaus was Emmaus *only* at the particular period when they were writing.

¹ Thermæ—hot-springs, meant properly warm springs or baths of warm water—but came to be applied to those magnificent edifices which grew up under the Empire in place of the simple balnea of the Republic. . . . Writers, however, use these terms without distinction; thus the baths erected by Claudius Etruseus, the freed man of the Emperor Claudian, are styled by Statius balnea, and by Martial Etrusci thermulæ,—“Dict. Greek and Roman Antiquities,” Art. *Balneæ*.

And when the splendid baths were laid in ruins the marble columns which had supported the roof, the capitals, the mosaics, and all the rest were mingled in general ruin, the baths lay buried under the ruins ; Emmaus disappeared and became known as the Hortus of King Herod (as of Solomon before him) to the Latin speaking soldier colonists of Titus who occupied the ground, aided perhaps by native Fellaheen. These latter in their turn swarmed over the land and took possession of it as Urtas, which it has remained till now.

All Jewish inhabitants must have disappeared and made way for the Roman soldiery, who would be at no pains to preserve the Hebrew name, otherwise it must have been handed on and preserved by the Fellaheen, whose language is so similar to Hebrew.

The marvellous fact remains that though the name of the village was lost, though the ruined baths were buried in the soil, these ignorant peasants had preserved to us in their unerring and imperishable tradition at the place, and the promontory of the Hammiâm, the clue to the discovery of the long lost Emmaus, here at 60 furlongs from Jerusalem, with its baths of royal magnificence.

Another consideration of deep interest suggests itself in connection with the sacred history of this Emmaus. King Solomon would not have appropriated this valley for his country retreat, unless it had been his by inheritance from his father David, and his grandfather Jesse, the Bethlehemite. He could not otherwise have obtained it, for the law of Moses forbade the alienation of land from any family by purchase or sale (Leviticus xxv, 23-31 ; Numbers xxxvi, 7-9 ; 1 Kings xxi, 3 ; Ezekiel xlvi, 18).

Now if the Urtas valley from Etham downwards was the family property of David's Royal House, it must also have been the legitimate inheritance of Him Who was the lineal descendant of David—and as such the rightful Heir to his possessions and to his throne—the acknowledged Son of David.

What an unexpected interest this gives to the simple narrative of St. Luke's Gospel, in which is accorded how on the day of His Resurrection the Lord joined the two disciples on their way to Emmaus. Cleophas himself as connected with the family of David may have also had some inherited part or share in the valley as well as in Bethlehem close by. Eusebius in the "Onomasticon" says that Cleophas *was a native of Emmaus*.

The invitation addressed by the disciples to our Lord was not that of mere strangers visiting the village.

How familiar must every object have been to these wayfarers—how well known every step of the road across the plain, now green with springing corn and bright with flowers, how pleasant every turn of the sweet retired road that leads winding from Rachel's sepulchre along the hill sides in full view of Bethlehem, to the sheltered valley.

The Edomite usurper of David's throne had appropriated to his own use this possession of David's family. Josephus tells us ("Wars," vii, 8, 4) that

“he feared the multitude of the Jews lest they should depose him and restore their former kings to the government.” He had tried by slaughter of the Innocents to destroy Him that was born at Bethlehem King of the Jews. Where was the Great Herod on that Easter evening when the risen son of David visited Emmaus with His two disciples? No man feared the tyrant now—he was dead thirty years before, and lying buried in his fortress-tomb on the summit of Herodium which looks down upon Bethlehem, and upon the Urtas valley.

Here, then, in the quiet village of Emmaus, the first meal was shared—the first bread broken, and the blessing given by our Lord. When the disciples saw Who He was, and rose up to go to Jerusalem, it was for no weary journey of twenty miles up steep mountain passes, but for a delightful walk by familiar paths, and across the smooth plain that they hastened forward to the Holy City—to find the eleven, and those that were with them, still assembled after supper.

This little company was shut in isolated and anxious, “for fear of the Jews.” What a different meal had theirs been from the feasts going on that night among the thousands of Israel who were keeping holiday in Jerusalem.

Some at least among the disciples had been disabled according to Mosaic law—“defiled by reason of a dead body,” when assisting at their Master’s burial, and in visiting His grave.

For them there would be no further share in festive social gatherings, in the grand temple services or the solemn benedictions of the High Priest. Their Passover had been abruptly closed in grief. Now suddenly sorrow and perplexities are ended. The two arrive with glad tidings, and while yet they are speaking, the Master appears with peace upon His lips, and confirmation of the joyful tidings. The lonely meal is timed with high festival by presence of the Divine Guest Who shares it with them. The testimony of the two is placed beyond doubt, for He repeats to the whole company the arguments from the Law of Moses, the Prophets, and the Psalms which had been the subject of discourse that afternoon on the way to Emmaus.

May we not say that we now know where that highly honoured village lay, and that the Emmaus 60 furlongs from Jerusalem has been identified with Urtas by the ruins of Herod’s costly baths?

The site of the royal gardens is still marked by trees bearing fruit in their season, nourished by refreshing streams, the mountains still breathe the fragrance of aromatic plants, the vineyards yield clusters of rich grapes, and pure waters are still carried by the ancient aqueduct from the fountain head to Bethlehem, and even sometimes to the Temple Courts on Moriah.

But the highest and most sacred interest of all that cleaves to this valley, this royal heritage (reserved unsold by the Royal Emperor when he ordered all other Judean lands to be put up for auction), is for ever bound up with our Lord’s visit to Emmaus on the day of His Resurrection with His two disciples.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

It is understood that the Porte is considering the whole question of exploration and excavations in the Turkish Empire, and that a new code of rules will before long become law. The conditions which will be laid down in the scheme under consideration are as yet unknown. We hope, however, that they will be favourable to the uninterrupted pursuit of such work as our own.

Meantime, we are watching for an opportunity to carry on the work of our programme. If it be found impossible for the present to continue the Survey of Eastern Palestine, we shall have to attack other parts of the work, of equal importance, though not of such general interest. It has been decided to issue, as soon as possible, the portions already surveyed, and Captain Conder, when he returns to the Committee in May, will compile the Memoirs of this portion.

The third volume of the Memoirs of the Western Survey, forming the fifth volume already issued, is now in course of publication. It contains Judæa, and as much of the south country as is included in the Survey. Subscribers who have not yet received their copies will be good enough to communicate with the Secretary.

The printing of the Jerusalem volume has been commenced. This work will contain, after an introductory chapter on previous research in and about the city— (1) Colonel Warren's detailed account of all his own excavations; (2) an account of M. Clermont Ganneau's work; (3) an account of Captain Conder's work; (4) the German work in the Muristan and on Ophel; (5) the Siloam Stone and other inscriptions found in Jerusalem; (6) an architectural history of all the buildings in Jerusalem, with reference to the contemporary and later notices of these buildings, and a reconstruction of Constantine's Basilica, and the group of churches which succeeded it, by Captain Conder; (7) an account of

researches outside the city, also by Captain Conder ; (8) a brief chronicle of the city, and a *resumé* of the controversy over the sites. This work will be, like the *Memoirs*, illustrated with woodcuts, plans, and maps, and will be accompanied by a portfolio of drawings, sections, and plans to illustrate Colonel Warren's papers. The book will not, like the *Memoirs*, be limited in number, though it forms a portion of the work called the "Survey of Western Palestine."

Canon Tristram's "Flora and Fauna" will complete the work. As regards this volume the author writes : "What I propose to give is a careful catalogue of all the species existing in the country, giving the Linnean names and references to the original authority for each name, the Hebrew and Arabic vernacular names when such are known, the range of each species within the country, and also the extent of its geographical range elsewhere. In the case of forms of life peculiar to the country more details may be given. I also propose to figure all species peculiar to Palestine, and some of the rarest which extend beyond its limits, but have never yet been figured. The mammals and birds are being drawn by Mr. Keuleman and Mr. Smit, and will be coloured. The reptiles and fishes are being engraved by Mr. Mintern. The volume will contain the mammalia, the birds, the reptiles, the fresh-water fish of the Jordan and its affluents, the land and fresh-water molluscs, the diurnal butterflies, the Orthoptera, the Arachnidæ, and the flora, comprising at least 1,600 species of phanerogamic plants." The printing of the work is already commenced. Hopes are entertained of bringing it out before the end of the year. This also will be issued independently of the great work of which it forms a part.

There are a few copies not yet subscribed of the "Survey of Western Palestine." The Committee are very desirous that these should be taken by Public Libraries. Librarians and subscribers are requested to communicate with the Secretary as to the terms on which Libraries can have the whole work.

The Old and New Testament Maps have been well received. Up to the present date there have been taken by subscribers, at subscribers' price—about 400 each. This is a fair beginning. But it is only a beginning. The Committee have placed all Sunday Schools on the same footing as subscribers, provided they apply to the Secretary at the office.

The authorised lecturers for the Society are—

- [1 (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—
 The Survey of Western Palestine, as illustrating Bible History.
 Palestine East of the Jordan.
 The Jerusalem Excavations.
 A Restoration of Ancient Jerusalem.

- (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

- (3) William Pearson, Esq., Homefield, Langbank, Port Glasgow, Scotland.

The income of the Society, from December 22nd to March 22nd inclusive, from all sources, amounted to £1,123 13s. 3d. The expenditure was as follows:—

	£	s.	d.
Maps and Memoirs	576	9	6
Printing account	100	0	0
General management	187	12	0

The amount lying in the Banks on April 2nd was £346 3s. 4d.

The following is the Balance Sheet of Receipts and Expenditure for the year 1832:—

RECEIPTS.

1832.	£	s.	d.
Jan. 1.—Balance	112	11	7
Dec. 31.—Subscriptions and Lectures	1,993	4	2
„ Maps and Memoirs	1,577	11	11
„ Books	97	13	6
„ Photographs	14	16	11
	<u>£3,795</u>	<u>18</u>	<u>1</u>

EXPENDITURE.

	£	s.	d.
Dec. 31.—Exploration	889	4	9
„ Maps and Memoirs	1,372	16	11
„ Salaries and wages, Rent, Advertising, Stationery, Bookbinding, Office and Sundries, Books and Translations	644	2	3
„ Lecture expenses	45	17	0
„ Postage	88	10	11
„ Printing	391	12	0
„ Balance	363	14	3
	<u>£3,795</u>	<u>18</u>	<u>1</u>

Examined and found correct.

W. MORRISON,
Treasurer.

The liabilities of the Society on January 1st were as follows:—

	£	s.	d.
1. Office and Printing account ..	569	12	4
2. Memoirs	669	6	6
3. Maps	825	7	2

On the first account a reduction of £200 has been already made, on the second of £407, and on the third of £250. The liabilities on the Map account will of course be cleared by the sale of the Maps.

The assets of the Society are—(1) the amount still due for the Memoirs, viz., £881 5s.: (2) the amount due for Maps, viz., £84 11s.: (3) the copies of the Memoirs which still remain unsubscribed: (4) the copyrights of books, engraved plates, negatives, and photographs: and (5) the office furniture, books, and scientific instruments. To these assets may be added the promised annual subscriptions. Subscribers will understand that the liabilities on the Maps and Memoirs account have nothing to do with the General Fund, and that the debts of the General Fund consist almost entirely of the printing bills.

As regards the general expenditure, the Survey party came home in the spring, so that the exploration expenses were much less than was anticipated. The division of the whole shows the following proportions. It will be observed that the management expenses are pretty nearly a fixed sum, viz., between six and seven hundred pounds a year, whatever else be spent.

Exploration	25·90	per cent.
Maps and Memoirs	39·98	„
Postage	2·57	„
Printing	11·39	„
Management and Lecture expenses	20·16	„

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

THE HOLY SEPULCHRE.

THE most interesting question connected with the topography of Jerusalem is that of the true site of the sepulchre of Joseph of Arimathea, in which Christ was laid, and of the place called Golgotha, or Calvary, where He was crucified, and which was "nigh at hand" to the sepulchre.

The indications of position contained in the Gospels are very slight. The two sites of Golgotha and the sepulchre were near each other (John xix, 42). The place of Crucifixion was "nigh to the city" (John xix, 20); and we learn from the Epistle to the Hebrews that Jesus "suffered without the gate" (Heb. xiii, 12). There is nothing, however, further to show which side of Jerusalem these sites should be placed.

It may reasonably, however, be supposed that Golgotha ("the Skull") was the ordinary place of execution for criminals, which is mentioned in the Mishnah under the name *Beth-has-Sekilah*—the "House of Stoning:" for there is no reason to think that the Roman procurator would have made use of a different place of execution to that established by the Jewish Sanhedrin, although that assembly had been debarred by the Romans from the power of inflicting capital punishment only a little before the date of the Crucifixion. This ancient Jewish place of execution is mentioned as follows in the Mishnah (or Text of the Talmud), about 150 A.D.

"When the judgment was finished they brought him forth to stone him. The place of stoning (*Beth-has-Sekilah*) was outside the Judgment Hall, as it is said, 'Bring him forth that hath cursed' (Levit. xxiv, 14). One stood at the door of the Judgment Hall with a scarf in his hand, and another man rode a horse far off from him, but so that he could see him. If any said, 'I have somewhat to say for his defence,' this one waved his scarf, and the other galoped his horse and stopped the accused; and even if he himself said, 'I have somewhat to tell in my defence,' they brought him back as many as four or five times, only there must be substance in his words. If they found him clear they set him free, but if not they took him forth to stone him. . . . The Place of Stoning was the height of two men. One of the witnesses threw him down on his loins; . . . if he died with that thrust it was finished, but if not the second witness took a stone and cast it on his breast. If he died with that blow the stoning was finished, but if not he was stoned by all Israel" (Sanhed. vi, 1-4).

From this somewhat crabbed description several interesting conclusions have been drawn by commentators. The passage quoted from Leviticus (xxiv, 14), together with the arrangement for communicating by a signal-man and a mounted man between the judges and the condemned, clearly shows that the place of execution was outside the city, and at some distance from the Judgment Hall. It is also understood that a cliff, some 12 feet high, existed at the place of execution, over which the condemned was thrown by the first witness. If he was not killed by the fall, the second witness cast down a stone on him, and the crowd on the cliff, or beneath, stood ready to complete the barbarous execution. It should be noted that

the other methods of execution detailed in the tract Sanhedrin are equally barbarous, and also that it appears to have been the custom to hang on a tree, or a cross, the bodies of those who were stoned. "They sunk the beam in the ground, and a cross-beam extended from it, and they bound his hands one over another, and hung him up" (Sanhed. vi, 4). The body was, however, removed at sundown according to the negative command (Deut. xxi, 23). Thus the "House of Stoning" was also a recognised place of crucifixion.

A tradition is current amongst the Jews of Jerusalem which places this "House of Stoning" at the present knoll, north of the Damascus gate, in which is a cave, known since the fifteenth century as the "Grotto of Jeremiah," with a cliff, the maximum height of which is about 50 feet, facing southwards towards the city. This tradition was first collected by Dr. Chaplin, and I afterwards twice obtained it independently from separate individuals, both being Spanish Jews, and thus belonging to the oldest community of Jews in the city.

This tradition is of course not in accord with that of the Christians, but it has several points in its favour. First, the site is outside ancient Jerusalem, as restored by the latest authorities, the third wall coinciding east of the Damascus gate with the present wall of the city. Second, the existence of an ancient Jewish tomb immediately to the west of the knoll, and of another, possibly Jewish, a little further south, would seem to indicate that the ancient city did not extend so far as to include the vicinity of the knoll: for we learn from the Talmud (Baba Bathra ii, 9; Tosiphta Baba Bathra i; cf. Yoma iii, 3) that all tombs were at least 50 cubits outside the walls, saving those of David and Huldah. Third, a Christian tradition, as early as the fifth century, also pointed to the vicinity of this site as the place of the stoning of Stephen, the proto-martyr. Fourth, the vicinity has apparently been always considered unlucky. In the fifteenth century we find Mejr ed Din speaking of the tract immediately east of the knoll, under the name *Es Sahrah*, "the desert," and pronouncing it to be accursed and haunted, so that the traveller should not pass it at night. This idea is no doubt connected with that of fixing the Valley of Judgment (or Jehosaphat) in the Kedron, which is still called by the Arabs Wâdy Jehennum (the Valley of Hell), an identification which is not supported by any very clear reference in the Bible, although the tradition is ancient and common to Jew, Christian, and Moslem (cf. Joel iii, 12). The valley passes not far east of the knoll, and has its head north of it, where the name Jehosaphat probably still survives in the Arabic name of the village of *Shâ'fât*. The name of the knoll, according to Mejr ed Din, was *El Heidemîneh* or *El Heidemîyeh*, and the latter is still the name given to the place by Moslems. It would mean "broken," or "destroyed," perhaps on account of the cliff; the Moslems, however, consider that it is a corruption of *Heirimîyeh*, in which case it is derived from the traditional Christian name of Jeremiah's Grotto.

The site is one well fitted for a place of public execution. The top of the knoll is 2,550 feet above the sea, or 110 above the top of the Sakhrâh rock in the Haram. It commands a view over the city walls to the Temple

enclosure and the Holy Sepulchre Church. A sort of amphitheatre is formed by the gentle slopes on the west ; and the whole population of the city might easily witness from the vicinity anything taking place on the top of the cliff. The knoll is just beside the main north road. It is occupied by a cemetery of Moslem tombs, which existed as early as the fifteenth century at least ; and the modern slaughter-house of Jerusalem is on the north slope. The hill is quite bare, with scanty grass covering the rocky soil, and a few irises and wild flowers growing among the graves. Not a tree or shrub exists on it, though fine olive groves stretch northward from its vicinity ; a few hungry dogs are generally prowling about, and an evil odour from the slaughter-house always offends the senses in climbing the slope. The hillock is rounded on all sides but the south, where the yellow cliff is pierced by two small caves high up in the sides. Some of the Jews appear to consider that the Beth-has-Sekilah was actually *in* one of these caves, which would accord better with the height of the cliff as mentioned in the Mishnah. Visitors of late years have sometimes thought that the hill with its caves resembles a skull with eye-sockets ; but this is perhaps rather a fanciful idea, and the best evidence lies in the Jewish tradition.

The proposal of identifying this hill with Calvary was first published in "Tent Work in Palestine ;" but in 1881 it was found that a Jewish tomb existed on a smaller knoll west of the north road, about 200 yards from the top of the first-mentioned knoll. It was apparently laid bare during building operations in the vicinity, and had not been previously described. This discovery led to the suggestion that the tomb thus standing alone might be the actual sepulchre of Joseph of Arimathea, and the idea excited considerable interest in England at the time.

Having thus noticed the sites to which Jewish tradition seems to point as representing the Holy Sepulchre and the place called Golgotha, we may pause for a moment to notice the Christian tradition as to these sites.

The first writer who speaks of these holy places after the Christian era is the Bordeaux pilgrim, who visited Jerusalem in 333 A.D., when Constantine's basilica was being built. He says, "On the left (of a pilgrim going to the Neapolitan or Nablus Gate) is the little hill Golgotha, where the Lord was crucified. Thence about a stone's throw is the cave where His body was placed." He thus apparently describes the present traditional sites in the Holy Sepulchre Church.

The early fathers and pilgrims (as, for instance, St. Willibald in 722 A.D.) also agree that the holy sites were outside Jerusalem in the time of Christ. Willibald says that St. Helena included them within the city walls ; Sœwulf (1103 A.D.) says that Hadrian did so ; but none deny that the wording of the Gospel and Epistle is clear on this point.

According to Eusebius, the Holy Sepulchre was concealed under a mound, on which stood a Temple of Venus, and on removing this the Holy Tomb was discovered quite unexpectedly by Macarius, "beyond all hope" and by "a miracle" ("Vita Const.," iii, 28-30). Constantine's letter to Macarius after this discovery, ordering the building of a basilica, does

not mention the finding of the Cross, said to have been dug up near this site by his mother Helena, in 326 A.D., but the story of this miraculous discovery is noticed by St. Cyril in 347 A.D. The Cross was apparently also seen by Sta Paula in 383 A.D., and the story is repeated by Theodoret in 440 A.D. It appears clear from these accounts that there was no extant tradition as to the site of the sepulchre, but that it was found unexpectedly, and even supposed to have been miraculously indicated to Helena (cf. Robinson, "Later Bib. Res.," pp. 256-8).

It has been argued that the site was known by the existence of the Venus temple, but there is nothing in the account of Eusebius to favour such a view. Considering how uncritical an age the fourth century is known to have been, it is more probable that Macarius, when he found an ancient tomb under the temple on its destruction, jumped to the conclusion that it was the Holy Sepulchre: even if it be not really more probable that an ancient Mithræum was reconsecrated as a holy Christian site by the Patriarch,—just as St. Clement's at Rome stands over a Mithræum, and as the cave of the Nativity at Bethlehem is stated by Jerome to have been long used as a Mithraic cavern. Instances innumerable might be quoted in which pagan sites were thus reconsecrated. Pope Gregory, in his famous letter to his clergy (Bede, p. 141), recommends such reconsecration of pagan shrines to Christian uses, as the people would more readily gather in accustomed places of worship. The annual ceremony of the Holy Fire, which is supposed to issue from the Holy Sepulchre, is clearly of pagan origin, and is traced back at least to the ninth century (Bernard the Wise). This fact also lends some support to the idea that the cave may have already existed beneath the temple of Venus, or Ashtoreth, and may have been reconsecrated by Macarius, under the name of the Sepulchre of Christ.

It has also been argued that remains of the ancient city must have existed, and that Constantine and Macarius would not have sought the Holy Sepulchre within its bounds. As regards the first part of this question, Eusebius does speak of such remains ("Theophania," p. 242), and also of New Jerusalem opposite the ruins of the old ("Vita Const.," iii, 33); but nearly three centuries had then elapsed since the great siege, and Jerusalem had been rebuilt by Hadrian, so that considerable archæological knowledge (such as was certainly not characteristic of the age) would have been required to determine the extent of the ancient town. As regards the second part of the contention, we must never forget that men did not argue in the fourth and fifth centuries in the manner which is distinctive of scientific research in the nineteenth; they were ready rather to adore the sites indicated by their priests, and to accept the authoritative assertion of patriarchs and preachers with humility. No one can read the homilies of Cyril, the letters of Jerome, or the itineraries of the early pilgrims, without seeing that this was the case. Jerome and Eusebius had curious ideas as to the waters of Bethesda; the Bordeaux pilgrim found the blood of Zacharias, son of Barachias, still visible on the marble before the altar: he even believed the Transfiguration to have occurred on Olivet, confusing it with the Ascension. Sta Paula found Samaria full of demons, who

“howled like wolves, hissed like serpents, bellowed like bulls,” according to Jerome’s account (“*Peregrinatio S. Paulæ*”). It was not only Antony of Piacenza who was credulous and superstitious. Traces of ignorance concerning Scripture, and of superstitious beliefs, are found in the earliest and best itineraries of the fourth century. It was an age when men did not very clearly distinguish between Christ and Serapis, when they mixed together the language of the Gospels and the jargon of solar worship. It was an age of belief in sacred footmarks on rocks, and similar wonders, and in no sense of critical or scientific reasoning. The idea that Constantine and Macarius must have taken pains to prove the truth of their new theory, is one which would not be put forward by a student of the fourth century literature as a whole, and it cannot for a moment bear the test of modern research. The notes I have made as to the course of the Tyropœon Valley show clearly that it sinks very rapidly from the narrow saddle near the citadel, and so-called Tower of David ; and no military man could for a moment admit that the second wall ran down into this deep valley, instead of occupying the saddle to the west (see “*Tent Work in Palestine*,” vol. i, p. 369). The second wall has not only been shown by Robinson to have started near the Tower of David, but the nature of the ground admits of no other line, and if Josephus is right in saying that it went thence “in a curve” to Antonia (5 Wars, iv, 2) it is quite impossible that the Church of the Holy Sepulchre should have been in the time of Christ outside this wall.

But even if this argument could be shown to be fallacious, there remains the fact that the traditional sites were certainly within Agrippa’s wall, which was built only eleven years after the Crucifixion, to defend the suburb which had grown up outside the second wall. Such a suburb would probably have taken in those days more than eleven years to attain the extent necessitating a new line of fortification. In this case, whether within or without, the Holy Sepulchre (as fixed by Constantine) was so close to the second wall that it is impossible to suppose its site not to have been surrounded by houses in the time of Christ, a fact which would be fatal to the authenticity of the site.

The result of ten years of study of this question has been to convince me of the following facts :—

1st. That the tomb of Nicodemus, immediately west of the traditional Holy Sepulchre, is the monument of the Kings of Judah, including the tombs of David and Solomon (see Conder’s “*Handbook to the Bible*,” p. 341, 3rd edition), and existed as such at the time of the Crucifixion.

2nd. that a temple of Venus or of Ashtoreth stood in Constantine’s time over the supposed Holy Sepulchre. That it was seen by Eusebius, and is the same shown on a coin of Antoninus Pius, which has the legend C.A.C. (*Colonia Ælia Capitolina*), with figures of Venus and Cupid. That the tomb was either covered up and not known to exist, or else that it was a crypt used for the mysteries which we know to have been connected with the worship of Venus (as, for instance, at Apheka on Lebanon, where the temple of the mourning Venus was destroyed, by Constantine’s orders, like that at Jerusalem). Jerome tells us that the Bethlehem crypt, over

which Constantine also built a basilica, was long used as a Mithræum, where the birth of Tammuz was celebrated. It must also be remembered that Constantine built a basilica on the summit of Olivet, where the foot-mark of Christ on the rock is still shown and supposed to have been imprinted at the Ascension; and this traditional site, which St. Helena visited before the Holy Sepulchre had been found, is not to be reconciled with the statement that Christ ascended near Bethany (Luke xxiv, 50; cf. Acts i, 12). It is quite possible that an old temple of Ashtoreth was restored in the second century on the spot now shown in the Holy Sepulchre Church, and reconsecrated to Christian use by Macarius as the Sepulchre of Christ.

3rd. That there is not a single allusion in any Christian writer earlier than Eusebius (fourth century) to the site of the Holy Sepulchre or of Calvary, and that we have a complete break in tradition of three centuries. The Christians left Jerusalem for Pella before the siege of Titus, and we do not know when they came back. Thus, even if they had preserved at first a feeling of veneration for the sepulchre, there is nothing to show that any tradition of its site was handed down by the Apostles to their successors; and had the site been considered very sacred by the Evangelists, they would probably have been more careful to describe its position. We know, however, that the Jews considered that a man became unclean if he stepped over a hidden tomb (Yoma, iii, 3), although the facts that the Holy Sepulchre was a new tomb never as yet used (Luke xxiii, 53), and that the body of Christ was raised again, may have modified this belief in respect to the particular tomb we are considering.

4th. All the evidence as yet collected points clearly to the fact that the present traditional sites were not outside Jerusalem at the date of the Crucifixion, and it is admitted by all writers, ancient and modern, that this objection is fatal to the authenticity of these sites.

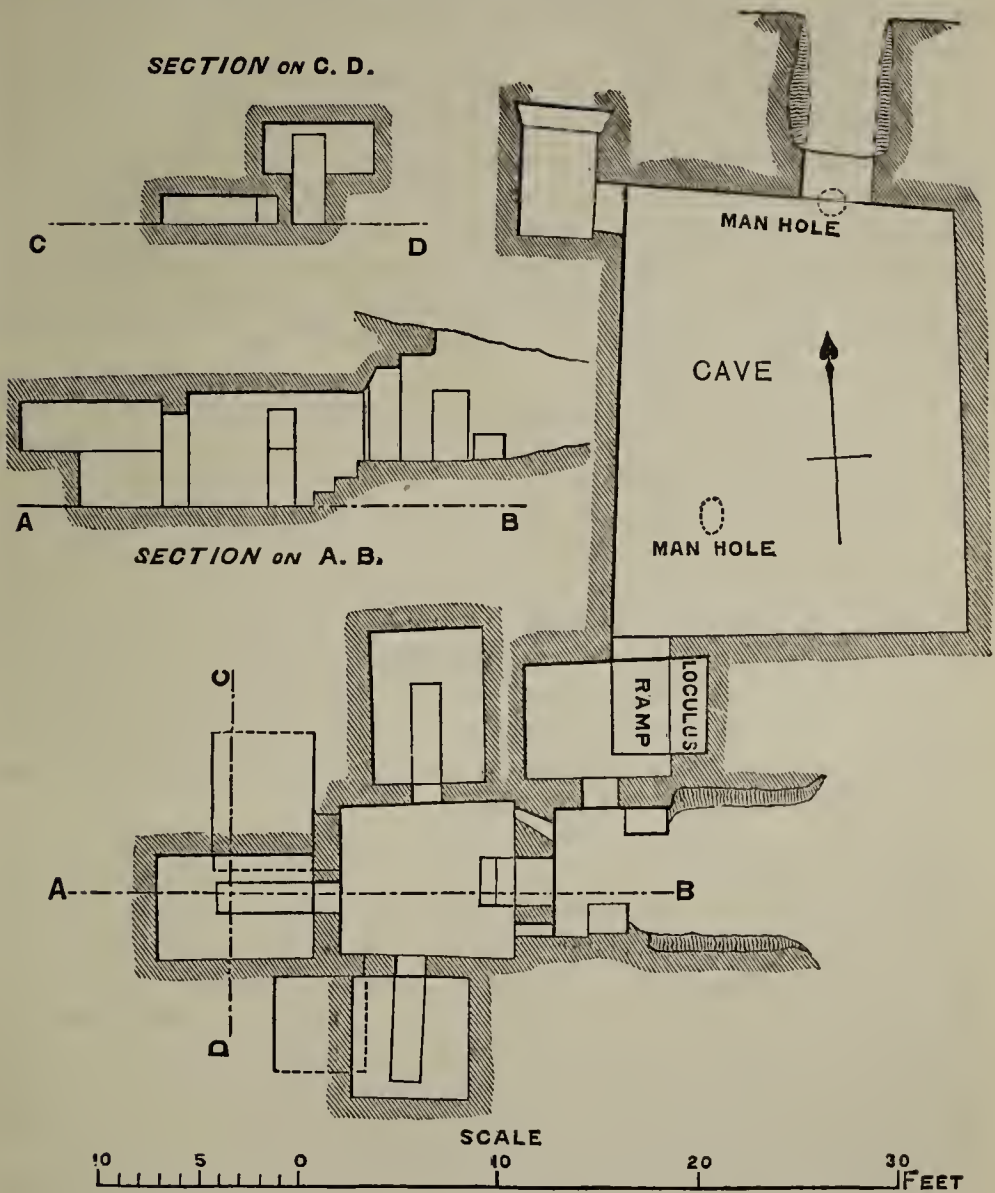
5th. The tradition of the Jews is more reliable, perhaps, than any Byzantine tradition, and the site which is indicated by the Jews appears to agree in a remarkable manner with the Gospel narrative.

6th. That a Jewish tomb exists nigh to the knoll, which Jewish tradition identifies as a place of execution, and even of crucifixion; and that this sepulchre would seem to have stood by itself in the gardens which we know existed north of Jerusalem (5 Wars, ii, 2), the principal Jewish cemetery of the period being further north in Wâdy el Joz.

7th. That this tomb is of the kind mentioned in the New Testament. Not a sepulchre with *kokim*, or tunnels, but one with a *loculus*, so that angels could have been seen seated at the head and at the feet (John xx, 12), which would be impossible in a *Koka* tomb, and that the *loculus* tomb is shown by dated monuments (as, for instance, the tomb of Helena, Queen of Adiabene) to have been the kind of sepulchre used by the Jews about the time of Christ.

Finally that, although certainty is impossible in face of the very scanty nature of the evidence, the sites now proposed have in their favour better arguments than any others.

The following is the description of the tomb in question sent home in 1881, here reprinted for convenience of reference :—



NEWLY DISCOVERED JEWISH TOMB NEAR THE CITY, 200 YARDS WEST OF JEREMIAH'S GROTTTO.

It is cut in the east face of a very curious rock platform, measuring about 70 paces either way—as shown on the Ordnance Survey, about 200 yards west of the grotto. The platform is roughly scarped on all sides, in an apparently artificial manner, and on the west is a higher piece of rock, also with sides rudely scarped. The rest of the space is fairly level, but there seem to be traces of the foundations of a surrounding wall in some low mounds near the edge of the platform. I have long been aware of the existence of a curious cistern in the north-east corner of this scarp. It has a domed roof with a man-hole, and also a door with a passage 10 ft. long and 3 ft. wide, leading out eastwards. The cistern is about 8 paces in

diameter, and three steps lead down from the door to the level of the cistern floor. This excavation seems originally to have been a chamber afterwards converted into a cistern, and there are sockets for the door-hinges and for bolts in the passage entrance.

The ancient tomb is some 30 paces further south, and the entrance is also from the east. The whole is very rudely cut in rock, which is of inferior quality. The doorway is much broken, and there is a loophole or window, 4 ft. wide, either side of the door. The outer court, cut in the rock, is 7 ft. square, and two stones are so placed in this as to give the idea that they may have held in place a rolling-stone before the door. On the right (or north) is a side entrance, leading into a chamber with a single loculus, and thence into a cave, some 8 paces square and 10 ft. high, with a well-mouth in the roof.

The chamber within the tomb entrance is reached by a descent of two steps, and measures 6 ft. by 9 ft. From either side wall, and from the back wall is an entrance 20 ins. wide and about $5\frac{1}{2}$ ft. high, leading into a side chamber. A passage runs in continuation of each entrance for $4\frac{1}{2}$ ft., and on each side is a bench about $2\frac{1}{2}$ ft. wide and $2\frac{1}{4}$ ft. high. A similar bench occurs at the end, the whole width of each chamber being thus $5\frac{1}{2}$ ft.; its length 7 ft. 2 ins., and its height from 5 to 6 ft. Each would contain two bodies lying beside the passage, but there would scarcely be room for three. In addition to these three chambers, there are two excavations on the floor-level, in the further corner of the central chamber. They are about 5 ft. square, with narrow entrances, and were scattered with human bones at the time of my visit.

The discovery of this tomb is of no little importance in connection with Jerusalem topography. If it be compared with the great cemetery at Sheikh (Ibreik Sheet V), and with the monument of Helena at Jerusalem, it will be seen to belong to the later Jewish period—the centuries immediately preceding the Christian era. It is not a Christian tomb, so far as can be judged, for the Christians in Palestine seem mainly to have used the “rock-sunk” tomb. A cemetery of tombs, of the form commonly used by the Crusaders, was found in 1870 near the north-east angle of the Jerusalem city walls, but no Jewish tomb has ever been found before so close to the ramparts of the modern city on the north.

It would be bold to hazard the suggestion that the single Jewish sepulchre thus found is indeed the tomb in the garden, nigh unto the place called Golgotha, which belonged to the rich Joseph of Arimathea; yet its appearance so near the old place of execution, and so far from the other tombs in the old cemeteries of the city, is extremely remarkable. I am sorry to say that a group of Jewish houses is growing up round the spot. The rock is being blasted for building-stone, and the tomb, unless preserved, may perhaps soon be entirely destroyed. It is now in a disgusting condition of filth, which shows that the oriental Jews have little reverence for the old sepulchres of their ancestors. Perhaps some of our readers might feel willing to redeem this most interesting monument from its present state of desecration, and to purchase and enclose the little plot of rocky

ground in which it stands. Without such preservation the sepulchre is doomed to destruction sooner or later.

The platform of rock in which the tomb is cut seems possibly to have been the base of a group of towers with a scarped foundation.

The distance from the monument of Helena, and the position with respect to the Cotton Grotto, agrees with the description given by Josephus (5 Wars, ii, 2) of the position of the "Women's Towers" (see Conder's "Handbook to the Bible," p. 352). If the third wall actually extended over this line, it is easy to explain why no other tombs of the same period exist so close to the present city. The extension of the fortifications rendered it necessary to remove the cemetery further off, since the Jews did not allow sepulture within the walls. The cisterns may have belonged to the period when the great towers were here erected, and the passage with steps may even have been a postern from the towers.

If we could feel any reasonable certitude that in this single Jewish tomb (dating about the time of Christ) we have recovered the actual sepulchre in which He lay, an easy explanation of the loss of the site is afforded at once; for the construction, some ten years later, of the "Women's Towers" by Agrippa, upon the rock over the tomb, would have caused the monument to be hidden beneath, or within the new buildings; and thus the sepulchre could no longer be visited, and in course of time its existence was forgotten, until the zealous Helena destroyed the Venus Temple on the present site of the Holy Sepulchre Church, and "beyond all hope" (as Eusebius words it) discovered the rock-cut Jewish tomb, which the faithful accepted as the tomb of Christ.

A careful plan of the site, and of the tomb, was made by Lieutenant Mantell, as the alterations in this part of Jerusalem are proceeding so rapidly, that on our next visit rock and tomb may alike have disappeared.

This tomb has since been visited by their Royal Highnesses Prince Edward and Prince George of Wales, and by many travellers, to one of whom we owe an excellent photograph of the entrance. I am also informed by Herr Schick that a slab of stone was found lying in the tomb, when it was excavated, with a cross and Greek inscription. The slab measured 3 feet 11 inches in length by 2 feet 7 inches in breadth. The lettering is 2½ inches high, the top line being 6 inches from the top of the slab. The inscription runs thus:—

+ ΘΗΚΗ ΔΙΑΦΕΡΩC

This is evidently a funerary tablet of the fifth or sixth century at earliest, and has no necessary connection with the original tomb.

As regards the door of the tomb in question, it is doubtful whether it was intended to be closed by a rolling stone, or by some other means; but it is also doubtful whether the expressions in the Gospel refer to a rolling cylindrical stone door or merely to the temporary closing of a new, and perhaps half finished, tomb by a large rough mass of stone as generally depicted. Sepulchres are often so closed in Palestine at the present time;

and when an old tomb door is thus stopped by stones it generally shows that bodies have recently been buried there by the fellahin.

The passages in the Gospels referring to the closing of the Holy Sepulchre are as follows :—

“And he rolled a great stone to the door of the sepulchre” (Matt. xxvii, 60).

“Made the sepulchre sure sealing the stone” (Matt. xxvii, 66). “Rolled back the stone from the door” (Matt. xxviii, 2).

“And rolled a stone unto the door of the sepulchre” (Mark xv, 46).

“Who shall roll us away the stone from the door of the sepulchre. And when they looked they saw that the stone was rolled away, for it was very great” (Mark xvi, 3-4).

“And they found the stone rolled away from the sepulchre” (Luke xxiv, 2).

“And seeth the stone taken away” (John xx, 1).

The Greek word *Lithos* used in all these passages is the ordinary word for a stone ; and there is nothing to show that a cylindrical stone door is intended ; so that, although such doors were in use in the time of Christ, it is not necessary that the Holy Sepulchre should be supposed to have been so closed, for there are many other methods which were used by the Jews in closing their tombs.

The plan shows a tomb with two chambers, the main one intended to hold at least six bodies, while the side chamber has only one loculus. We know from the Talmud that it was customary in excavating a Jewish tomb to begin with a chamber for nine bodies (Mishnah, Baba Bathra, vi, 8), the sepulchre being hewn as a family vault. Perhaps the single loculus in the side chamber may have been the veritable new tomb, “wherein never man before was laid” (Luke xxiii, 53). The cave opening out of the chamber northwards is probably a late excavation, and has no connection with the original tomb.

Such then is a simple statement of the existing evidence as to the Holy Sepulchre and Calvary. The rude tomb, perhaps unfinished, is hewn in friable rock, and is thus—as is generally the case—less carefully cut than the sepulchres, which were excavated in harder material. It is defiled and ruinous, crumbling and desecrated, but it still stands in a garden by itself. If the result of the discovery, and of what has now been written on the subject, should be the redemption of the site from its present condition of pollution, and its preservation in a simple enclosure—even if the rock be never crowned by any Christian monument, chapel, or cross, the writer of these pages will feel fully rewarded for the time and labour which he has devoted to the question of the true Sepulchre of Christ.

C. R. CONDER, *Capt. R.E.*

24th February, 1883.

THE EXODUS

I.

GUILDFORD,

26th February, 1883.

THE interest in the land of Goshen has been steadily increasing of late, and M. Naville's discovery at Tell Mahûta, together with the late war, attracts attention to the topography of the Exodus. Having spent some weeks in this district, visiting Kantara, Ism'ailieh, Tell Mahûta, and Tell el Kebîr, I venture to put together the ideas suggested by study on the spot.

There are two points which it is important to keep in view in treating this subject. *First*, the *rate* at which it would have been possible for the Israelites to travel. *Secondly*, the physical changes which must have taken place in the country since the date of the Exodus.

Rate.—It seems hardly possible to suppose that the Israelites, with women, children, flocks and herds, could, even when fleeing from their tyrants, have marched faster than the picked infantry of the British army. It is probable also that they did not at first expect to be pursued, having just found the Egyptians so anxious for their departure. It seems, therefore, reasonable to suppose that they did not go more than ten miles a day at most. The modern Arabs, when they move camp, do not generally travel more than about six miles at most in one day. It seems also important to keep clearly in mind the fact that *water* was indispensable to the very existence of the moving host, and we cannot therefore carry them into districts where only salt water could be found. They must have proceeded by caravan routes marked by wells, or else along existing arms of the Nile. The Pelusiatic branch was not then silted up, and it appeared clear to me that Wâdy Tumeilât is an old arm of the Nile. Practically we are reduced to two routes: First, that from *Sân* to Syria viâ Kantara, which is the modern caravan road; and second, that down Wâdy Tumeilât crossing by Ism'ailieh. The discoveries and suggestions of Brugsch seem to point to the first, and the late discovery of M. Naville seems to point to the last.

Physical Features.—The experience of the Palestine survey rather leads to a rejection of the idea that great changes in fertility of oriental regions have taken place, and it is not to such conjectures that I would now refer, but to the question of the growth of the Nile delta, and the gradual advance of the Egyptian shore line. This is not a matter of conjecture at all, but of actual scientific observation, and it is one which profoundly affects the topography of the land of Goshen. Writers who assume that the shoals and sandpits of the present time existed fifteen centuries before Christ, cannot have read what has been written by engineers about the Nile. Those who wish to study this question in detail should refer to two very able articles in the "Edinburgh Review" for January, 1877, and July,

1879, called "Mediterranean Deltas," and "Brugsch's 'Egypt under the Pharaohs,'" where they will find the history of the Nile growth treated in detail, and the rather hasty theories of Brugsch considered from a practical and scientific point of view, with authorities of the soundest character duly quoted.

It is not only the Nile which has thus for many centuries been adding land to the maritime districts. The Po, the Tiber, the Rhone, the Danube, all increase in length by the growth of deltas which have been measured, and the Euphrates is equally active. In the time of Alexander the Great, the *Shatt el 'Arab* had not been formed, and the mouths of the Tigris and Euphrates were a day's journey apart. The growth of the Euphrates delta goes on at the rate of a mile in seventy years, and Sir H. Rawlinson believes that formerly its rate was a mile in thirty years. Alexander founded the city Charax on the site of the present Mohammerah at a distance of only 2,000 paces from the sea, but that town was fifty miles inland in the time of Juba II, about the Christian era. In Sennacherib's time the sea ran up yet higher, for he crossed the Nar Marratum (cf. Jer. l, 21), or "salt water streams," into which Tigris and Euphrates flowed separately, when going to Naqitu or Bussorah. The modern Kornah, now 100 miles from the sea, was apparently then a seaport. The town of Uruk, or Mugheir (perhaps Ur of the Chaldees), appears to have been also once a seaport, where the fish-like Oannes appeared from the waters; and in 2000 B.C. Babylon was apparently only 150 miles from the sea, instead of 300 miles.

Turning again to the Nile, there is ample evidence of the growth of the Delta. Herodotus believed (ii, 5) that when Memphis was founded, thirty centuries before the Exodus, all Egypt except the Theban Nome was a marsh, and that none of those parts which afterwards existed below Lake Moeris (near Memphis) were then above water. This seems to agree with the derivation of the name Memphis, which some authorities translate "good harbour," though it is now 120 miles inland. It must be remembered that Sân, or Zoan, eighty miles north-east of Memphis, existed already in the time of the 6th Dynasty, or about ten centuries before Abraham. Thus, instead of a bulging delta, the original Nile mouth at the dawn of history would seem to have been in a deep gulf, which has been ever since filling up with the fertile soil brought down from the Abyssinian highlands.

A few details of the Nile growth may be quoted. It should be noticed that Ptolemy does not show any part of Egypt further north than 31° north latitude, which is about the latitude of Zoan. The writer in the "Edinburgh Review" also recognises the artificial straight channels of the Phatmic and Bolbitic mouths far inland, believing that in the time of Herodotus (or eleven centuries after the Exodus) these mouths were only sixty geographical miles north of the bifurcation of the river. Herodotus (ii, 11) says that if the Nile had flowed into the Red Sea nothing could have prevented its being entirely filled up by the mud brought down by the river, and he says also distinctly that the Delta was formerly a bay of

the Mediterranean. He was not aware of the silting up of the Pelusiac mouth, which we now see to be a final result of the Nile mud, and it is probable that another mouth existed near Ism'ailieh, belonging to an arm now represented by Wâdy Tumeilât, which even in Necho's time (600 B.C.) had ceased to exist and was replaced by his canal, still running parallel to the modern Sweet Water Canal on the south side. The Suez isthmus must have been partly formed by the mud brought down this arm; and the lakes Balah and Timsah, with the Bitter Lakes, are perhaps the survivals of the old arm of the Red Sea, which now extends only to Suez. The Suez Canal, in fact, is only a feeble human effort to counteract the mighty natural action of the great river of Egypt.

From the "Edinburgh Review" (Jan., 1877) we gather the following facts. The littoral current carries the Nile mud eastwards to the Syrian coast, where it assists in forming the sand dunes. There is no scour from Lake Menzaleh or from Port Said, and the dredging alone keeps open the canal mouth, 721,000 cubic yards having been dredged in 1875. The currents depend mainly on the wind, and the prevailing wind blows from the north-west. The Damietta mouth and the projecting coast east of Port Said have, according to Sir H. Rawlinson, the strongest currents, and the coast-line was here advancing at the rate of three-quarters of a mile between 1856 and 1875. The shore of the Pelusiac bay is advancing seawards at the rate of thirty-three yards per annum.

The observations of the well-known engineer, Mr. Fowler, in the service of the Khedive, are the most valuable we possess. The solid matter brought down in a year by the Nile is sixty-two millions of tons at least; the muddy colour of the sea at high Nile can be traced ten leagues from shore, and the soundings taken by Admiral Spratt between El Arish and Abu Kîr bay give depths of only fourteen to twenty fathoms at a distance of twenty miles from shore. The actual encroachment of the shore at Port Said between 1868 and 1873 was at the rate of fifty-six yards per annum, and the gradual historic growth of the Delta is placed at about half that rate. These are but a few of the remarkable observations collected in this paper, but in face of such facts Mr. Greville Chester's statement seems rather unsatisfactory. He admits the growth west of the hillock called *El Gelseh*, but says, "I am convinced by personal observation that such processes are not in operation at the present time to the east of that point." Mr. Chester has evidently not fully appreciated the stupendous character of the action of the Nile and the results of recent surveys. His proposal to stop the action at the precise point which suits his theory rather reminds us of King Canute's chair on the seashore, when we compare it with the surveys and soundings of engineers and Admiralty charts, for Admiral Spratt's chart shows the current to run as far even as Gaza.

The average rate of growth of the shore-line would thus seem to be about a mile in sixty years, which is less than that of Euphrates in early times, and there are no known counteracting causes. The mud must go somewhere, and as the wind is in the north-west for the greater part of

the year, most of the mud is washed along the coast eastwards, and the sea is brown with it leagues from shore. Even if we take the very late date given by Egyptologists for the Exodus (which I for one believe to be founded on the most insufficient evidence) we have an interval of thirty-two centuries between the time of Moses and our own times, which would be enough to give an increase in the shore-line of fifty miles—that is, for the formation of all that part of the Isthmus of Suez between Ism'ailieh and Port Said. No doubt we must make allowances for the deposit of the mud near the apex of the Delta, which would have been greater at first than now, and we must not forget the position and antiquity of Zoan; but even with these deductions we are left far south of the present shoal which closes Lake Menzaleh. It is impossible to travel through the dismal flats surrounding the Suez Canal, to look on the swamps and shallow waters of Menzaleh, or to examine the friable limestone deposits near Kantara, without recognising the action which has been thus going on for ages. The river pouring down its mud to the sea was met continually by the swell caused by the north-west wind. The sudden arrestation of the current caused a large precipitate of mud. A shoal thus formed at the mouth with an inland lake like Menzaleh or Mariût, and a glance at the map shows us a chain of such Serbonian bogs all along the Delta. As more soil was carried down, these gradually dried, and part of Menzaleh has dried since the canal was made. New shoals formed out at sea, new lakes were gradually enclosed and gradually dried, and all the time the isthmus was growing wider and wider, both at the north end and on the south, until the Tumeilât and Pelusiatic branches of the Nile had been entirely choked with their own mud, and the Red Sea had been partly choked by the Nile—a fact which Herodotus did not suspect, as it had happened long before his time.

I have thus given pretty fully the reasons which induced me, in 1879, entirely to reject Dr. Brugsch's theory of the Exodus, and to express my disbelief in the identity of the old Serbonian bog with the lagoon near El Gelseh. No doubt a Serbonian bog existed in Roman times on this part of the coast, and the present lagoon is its successor; but the shore-line has gone seaward in places at least ten miles since then, and the ancient bog must now be dry land.

The highest land in the isthmus appears to be El Jisr, or the cutting north of Ism'ailieh; but even here there is no appearance of hard rock, and nothing to show that Africa was not, even within the time of man's habitation of the earth, a great island afterwards joined to Asia by the industrious Nile. As, however, Tell Defenneh appears to be an old Egyptian site, we should probably not be far wrong in supposing that the Mediterranean reached only to Kantara at the time of the Exodus, and that the Pelusiatic Nile mouth here existed, and perhaps marshes or lakes represented by the existing lake Balah, connecting the Mediterranean with the head of the Red Sea, which might, without any extravagance, have been supposed to extend at least to the Timsah lake, where perhaps another Nile mouth yet existed, now represented by Wâdy Tumeilât. It was at Kantarah,

apparently, that the Egyptian road to Syria from Zoan crossed the line of the present canal in the time of the 19th Dynasty, and the history of the Nile deposit proves to us that, in writing about the Exodus, we have not to deal with an isthmus 100 miles wide, but with a narrow passage among marshes and lagoons between the ancient shores of the Red Sea and the Mediterranean.

I would repeat that this is not a matter of conjecture or opinion—it is one of scientific observation and historical evidence; and that, consequently, Dr. Brugsch's theory that the Israelites marched along a narrow shoal or strip of shore between the Mediterranean and the lagoon opening at Saranît, together with Mr. G. Chester's view that they went to El Gelseh, which he identifies with Mount Casius, or Canon Scarth's view that the Hebrews camped west of Tell Hîr, are all condemned by the fact that these dreary flats and dunes can be shown, by the observations of skilled engineers and surveyors, to have had no existence in the time of Moses.

In the review of Dr. Brugsch's History of Egypt above quoted in the "Edinburgh Review," these facts are dwelt upon, as well as the extraordinary improbability of the theory which makes the Israelites go out of their road, especially to travel along this dangerous boggy strip (for they were bound for Sinai, not for Syria), and which supposes that a mixed multitude with flocks and herds could have travelled forty miles in a single day along a waterless tract, and again which supposes the position of the Israelite camp to be indicated by references to places twenty or thirty miles away from each other.

By the light of such facts as have been collected by engineers, who were not thinking of the Exodus at all, we may now proceed to study the topography of the episode; but in our present state of knowledge concerning ancient Egypt it is not possible to treat the question with that amount of definition which we have attained to in Palestine, through the labours of the Exploration Society. I would, however, here put together a few notes as to Goshen, Rameses, Pithom, Etham, Succoth, Pi-ha-khiroth, Migdol, Baal-Zephon, the Yam Soph, and Marah, which may perhaps be useful to those interested in the subject.¹

Goshen.—The district of Goshen, or the "pastoral land," which Dr. Beke once placed in the Sinaitic peninsula, has been defined with tolerable precision (see, "Handbook to the Bible," pp. 245–6) as being that part of the Delta which extends south of *Sân*, or Zoan, to the desert of hard sand and gravel south of the Sweet Water Canal. It included the Plain of Zoan (Ps. lxxviii, 11), and the LXX version speaks of Gesen of Arabia, thus apparently identifying Goshen with the Egyptian Arabian Nome, which

¹ I have not here referred to the theories of Josephus and the Septuagint as to the Exodus, in order not to confuse the question; for these later writers seem to understand a march from Heliopolis, near Cairo, which is quite impossible on account of distance. As they lived thirteen or fifteen centuries after Moses, their opinions are not of much importance.

agrees with the meaning of the two words. The capital of the Arabian Nome was called Gosem, and is identified by Brugsch ("Egypt under the Pharaohs," ii, 339) as the later Phacussa, the name of which survives in the ruin of Fakûs, about half way between Sân and Tell el Kebîr.

Colonel Tulloch suggested to me that the district round Kassasin, which is now desert, was once irrigated and fertile. There is no doubt that the fertility of Wâdy Tumeilât is rapidly decreasing, and it is probable that the fertile strip here existing along the course of the Sweet Water Canal was once much broader and less sandy. I could, however, see nothing which led to the supposition that the higher ground about Kassasin, Tell el Kebir, and northwards to Salahîyeh, was ever anything but a desert. It consists of hard sand covered with rounded pebbles.

This, however, is a question of degree only, for rich pastures must have existed along the Tumeilât and Pelusiac branches, and the Israelite shepherds no doubt wandered along the valley by which the British army advanced in 1882.

Rameses.—This city, which has wandered from Heliopolis, near Cairo, to Tell Mahûta, near Ism'ailieh, has apparently been brought to anchor by Brugsch at Sân, or Zoan. Zoan is found to have existed in the time of the 6th Dynasty, but Brugsch finds it to have been called Pi Ramessu by Rameses II. The identification is not by any means complete, because the land of Raamses is mentioned in the Bible long before the Exodus (Gen. xlvii, 11–27), and the identification can hardly be reconciled with M. Naville's identification of Succoth at Tell Mahûta. One of the chief arguments in favour of the date proposed by Egyptologists for the Exodus is founded on the mention of Rameses as the starting-point (Exod. xii, 37, Num. xxxiii, 5), but the earliest mention of the land of Rameses in Genesis destroys much of the force of the argument, for no critic has as yet proposed to make the descent of Jacob into Egypt as late as the time of Miamun, the founder of Pi Ramessu. Mr. Poole has shown that the name Rameses was given to a prince before the time of Rameses I, and the worship of Ra—the midday sun—from whom the name Ra-meses, or "Servant of Ra," is derived, is very ancient in Egypt. It does not, therefore, appear to be quite certain that the Rameses of Exodus is Zoan, although the wording of the Psalm (lxxviii, 11) favours such a view.

Pithom (Exod. i, 11), that is, Pi-Tum, the city of Tum, the rising sun, was the second store city built by the Israelites, but it is not mentioned in the account of the Exodus, unless we suppose it to be Etham, which philologically would not be impossible. Herodotus knew of a Patumos which might very well be Pithom, near the canal from Bubastis to the Red Sea—that is, in or near Wâdy Tumeilât (ii, 158), and he calls it the Arabian city. The Antonine Itinerary, in the second century A.D., places Thou, or Thoum, fifty Roman miles from Heliopolis, and forty-eight from Pelusium. Both these notices would agree very fairly with M. Naville's discovery of Pithom at Tell Mahûta, where Linant placed Rameses, and where General Willis's headquarters and the Guards' brigade were posted until shortly before

the Tell el Kebir battle. The time of my visit was not favourable to archæological purposes, but there were plain indications in the great sand mounds of works more ancient and formidable than those of Arabi's troops, and Necho's canal still exists as a fetid ditch south of the so-called Sweet Water Canal.

Succoth.—M. Naville also identifies the same site with Succoth, the Egyptian Thuku. The Nome of Thuku was the eighth, and Pithom was its capital; it is the later Sethroite nome, the capital of which was Heracleopolis Parva, according to Brugsch (ii, 340). This connection of Pithom and Succoth induces Brugsch to place Pithom north of the modern Kantarah, in order to agree with his theory of the Exodus. If Pithom and Succoth be identical, the latter is the Semitic or Hyksos name, meaning "tents."

Etham, according to Brugsch, is to be identified with an Egyptian Khetam, or "fortress," of which there appear to have been several. It may be objected that the Hebrew does not contain the guttural of the Egyptian, and the new site for Succoth will certainly not agree with the theory of Brugsch. The Khetam to which he refers is represented as a fortress astride a river, close to a city called Tabenet, or Dapeneh, which he supposes to be the Daphnai of Herodotus (ii, 30) near Pelusium, which is identified with the present Tell Defenneh, some twenty miles south-east of Zoan. Khetam of Menephtah is, however, mentioned in papyri of the 19th Dynasty as in the "land of Sukot," near Pitom, and "the lakes" of Pitom. It does not appear to be by any means certain that this is the Khetam of the land of Zal (or Zoan) which opened its gates to Rameses Miamun, whence he marched north through the desert to attack the Hittites; and Brugsch himself tells us that there were several such Khetams.

A good deal of stress has been laid by Brugsch on an Egyptian account of a journey in pursuit of runaway slaves in the time of Seti II ("Egypt under the Pharaohs," ii, 132). The writer starts from Zoan and reaches Thuku on the following day, and on the fourth he arrives at a certain Khetam, or "fortress," lying south of the former, north of which is a Migdol of King Seti. There is a curious parallelism of names, but there is no real identification deducible from this document with respect to the Exodus route, for, as we have seen, there were several Khetams, and there seem to have been also several Migdols, while the word Khetam is not of necessity the Hebrew Etham.

Migdol—"the tower"—is, like Succoth, a Semitic name, and the nomenclature of the eastern part of the Delta was in great part Semitic, for it was here that the Semitic Hyksos lived for five centuries, until expelled by the great 18th Dynasty. A Magdolum, twelve miles from Pelusium, on the route leading to the Serapeum, is mentioned in the Antonine Itinerary, which would be a little north of Kantarah. There was a Migdol of Seti, the name of which, according to Brugsch, was Samut, in the land of Hazian, and this he places at Tell Samût, near Kantarah, identifying the land of Hazian with the later Casius, near the Serbonian bog ("Egypt under the Pharaohs," i, 207). Samût is supposed to have been the Egyptian,

and Migdol the Semitic name of this site ; but we may note that Migdol is a name which, in hieroglyphic character, would not easily be distinguished from Miktor.

The Migdol of the Exodus (Exod. xiv, 2) was apparently near the sea (Yam Soph), and the Israelite camp was between the two. I noticed with great interest on the Staff Map of Egypt a Bir Mejdol marked north-east of Ism'ailieh. This may perhaps indicate the site of another Migdol, and the vicinity might with advantage be explored.

Pi-ha-Khiroth.—This is rendered by Brugsch (ii, 363) “entrance to the gulfs,” but the public should be warned that Renouf has devoted a long and learned paper, printed in the “Transactions of the Biblical Archæological Society” (November 7th, 1882), to this word, and that he has shown pretty conclusively that Dr. Brugsch’s word Khiroth does not exist. Thus we fall back on the two earlier derivations given by Gesenius and other authorities, that from the Hebrew meaning “mouth of caverns,” and that from the Coptic signifying “place of sedge.” It is curious that the name of *Tell el Hîr* does not seem to have been connected by Brugsch with *Khiroth*, though it seems radically to represent the Hebrew. In the LXX the word *επαυλεως* (“farms,” or “pastures”) appears to represent *Pi-ha-Khiroth*. This would agree very well with the fact that the Israelites encamped at this spot, where they would have found pasture for their cattle. Brugsch makes *Tell el Hîr* to be the Hyksos Avaris, but if we take the *Pi* to be the same Egyptian prefix found in *Pi Ramessu* and *Pithom*, there is perhaps no reason why *Pi-ha-Khiroth* may not be the same as Avaris or Hawar.

Baal-Zephon (“Lord of the north,” or of the “dark”) is naturally to be connected with Typhon, or Tzephon, the dark Semitic enemy of Osiris. On Egyptian monuments, however, *Baal-Zapuna* is mentioned apparently as identical with Amon, “Lord of the North,” and Brugsch suggests an identity with the later Jupiter Casius, and thus with the land of Hazion. The term *Baal-Zephon* might, on the other hand, be merely rendered “Ridge of the North.” It is perhaps worthy of consideration, whether the name *Bîrket Bâlah* has any connection with this Semitic Baal, who like Set was no doubt a Hyksos divinity. Brugsch places *Baal-Zephon* at *El Gelseh*, but if this mound existed at the time of the Exodus, which could only be determined by a geological examination of the spot, it was probably as a rock in the sea, round which the shoals have since formed. If we were to accept the route proposed by Brugsch, the Israelites must have marched more than *forty miles* in a single day, which is an achievement never attained to by the picked infantry of Germany, over hard roads, and clearly impossible for a mixed multitude in the quicksands of the *Gelseh* shoal.

Yam Soph.—There has been a tendency among all writers, since Brugsch’s theory was first published, to suppose that the Israelites crossed some part of the Mediterranean, and not, as previously supposed, over the Red Sea. It is therefore necessary to state clearly what is known as to the *Yam Soph*, which the Greek translators render *Erythrean Sea*.

The word *Soph* appears to be the Egyptian *Tufi*, and applies to the "flags" among which the ark of bullrushes was laid (Exod. ii, 2). The bullrushes were papyrus plants, but the *Suph* may have been marine plants, or seaweeds, as pointed out by Canon Tristram, for the word is again used (Jonah ii, 5) in connection with the sea, "the weeds were wrapped about my head," evidently referring to algæ. The words *Gome* and *Akhu* are those which properly refer in the Bible to papyri and river vegetation.

The Yam Soph is a term applied in a later book of the Bible (1 Kings ix, 26) to the Gulf of Akabah; but it is of more importance to our present subject to observe that Israel again camps by the Yam Soph (Num. xxxiii, 10) after leaving Elim on their way to Sinai. There is thus no escape possible from the fact that the Gulf of Suez, rather than any part of the Mediterranean, or its lagoons, is the sea intended in the account of the Exodus by the Hebrew Yam Soph, rightly paraphrased by the Greek translators as Erythrean or Red Sea.

A distinction has been drawn by some writers between the "sea" by which the Israelites encamped (Exod. xiv), and the Yam Soph. There is no doubt, however, that it was the Yam Soph in which the Egyptians were drowned, and which the Israelites crossed (Exod. xv, 4); and the distinction is not a very probable one, as the writer would perhaps have been more definite in his wording if he was speaking of two different seas.

As regards the "east wind" (Exod. xiv, 21) which divided the waters, it should also be noted that there is by no means a consensus of opinion as to the translation. The Hebrew root is קדם, which means "before," of time or place, and the meaning may perhaps be only "contrary" or "opposing." The Greek translation is "a south wind," and the Latin Vulgate has *urens*, or "burning." It is difficult to see how a due east wind, which is not generally a strong wind, can have affected either the Red Sea or the Mediterranean, which would be driven back by north and south winds respectively.

Marah.—This was the camp where bitter water was found by Israel, after three days' journey through the wilderness of Shur (Exod. xv, 22, 23), in a waterless tract. If Marah could be fixed we might have another indication of the line of passage. It is therefore worthy of notice that on the Staff Map of Egypt a *Bîr Murrah* is marked, east of Ism'ailieh, and on the Asiatic side of the canal. The modern name is identical with the Hebrew Marah, "bitter," and such wells are generally very ancient. Bîr Murrah is about twenty-five miles south of Kantarah, and this would represent quite a maximum three days' march for a mixed multitude who were short of water.

We have thus two sets of identifications to consider, belonging to two routes, one leading to Kantarah, and one to Ism'ailieh—the first being that advocated by Brugsch, and the second that noted in the valuable paper by Mr. Poole, in Smith's Bible Dictionary. These sites would be as follows:—

(EXOD. XII, 37 ; XIII, 20 ; XIV, 2.) NORTH ROUTE.				SOUTH ROUTE.	
Rameses	....	....	Sân (or Zoan).	—	
Pithom			—	Tell Mahûtah.	
Succoth			—	Tell Mahûtah.	
Etham	....	....	Khetam (Tell Defenneh).		
Pi-ha-hiroth		....	Gelseh Hameideh (Brugsch), Tell el Hir? (C.R.C.)	—	
Migdol	....	....	Tell Samût (Brugsch).	Bir Mejdol? (C.R.C.)	
Baal-Zephon		....	Gelseh (Brugsch).	—	
Yam Soph....		....	Lagoon of Gelseh (Brugsch).	Birket Timsah.	
Marah	....	....	Bir Murrah? (C.R.C.)	Bitter Lakes or 'Ayûn Mûsa.	

Such appears to be the present state of our information as to the two routes. I would not venture to express an opinion between authorities like Brugsch and Poole, but one or two notes may be added which, with the three suggestions above given as to Pi-ha-khiroth, Migdol, and Marah, may perhaps be useful in further discussion of the question.

In the first place, the Israelites started from Rameses, and journeyed to Succoth (Exod. xii, 37) apparently in one day. Now if Succoth be really Tell Mahûtah, it seems quite impossible to suppose that the Rameses of this passage is Zoan or Pi-Ramessu, which lies thirty-five miles north of Tell Mahûtah, a distance far too great for a single day's journey of a mixed multitude ; the road leading, moreover, for more than half the distance over a waterless desert.

If we accept the south route we must either seek for a second Rameses, perhaps older than the time of Rameses Miamun, or we must consider merely the "land of Raamses" to be intended (Gen. xlvii, 11), a district equivalent to Goshen.

Secondly, it must be confessed that Brugsch's identifications of Etham, Migdol, Pi-ha-hiroth, and Baal-Zephon cannot be considered to be very convincing. They are no doubt possible (save the last), and agree together fairly, giving journeys of ten miles per diem as far as Etham, but afterwards becoming quite out of all possibility in distance.

Thirdly, a great deal hinges on the expression, "turn and encamp before Pi-ha-hiroth" (Exod. xiv, 2). This site cannot have been more than about twenty miles from Succoth, and ten from Etham, and the definition would suggest its close proximity to Baal-Zephon and Migdol, which Brugsch entirely neglects, placing Pi-ha-hiroth fifteen miles from his Migdol, and thirty miles from his Baal Zephon, which would be like defining Tunbridge as between London and Hastings—not a very minute topographical indication. Now the word "turn," though rendered also "turn back" by the Greek translators, appears to come from the root **יָשַׁב**, which means to

“abide” or “inhabit,” and if we were to render it “stay and encamp,” the meaning would perhaps be more accurately conveyed. This is, however, a question to be decided by a Hebrew scholar, and is only indicated here as one for examination.

The two routes thus appear each to have arguments in their favour, but the general impression which a study of the ground, and of what has been written, has made upon me, is that the southern route is the most probable. If we could find Etham near Nefîsheh, and if we have a survival of the name Migdol in Bîr Mejdêl, then the route of the Israelites will prove to have been down Wâdy Tumeilât, from the land of Rameses, through Pithom or Succoth.

The *Gîsr*, or “isthmus,” north of Ism’ailieh, is about fifty feet above sea-level. It seems to be the nucleus of the isthmus, and it may have existed at the time of the Exodus, separating the Mediterranean from the Yam Soph, or “weedy sea,” a swamp formed near Ism’ailieh, where the Tumeilât branch of the river was perhaps still pouring its mud into the Red Sea. If this isthmus existed we can have no hesitation in accepting the Tumeilât route, and in discarding all ideas of a connection with the Mediterranean. If it did not, lagoons and swamps may have connected the Red Sea and Mediterranean, and the precarious crossing through these might have occurred near Kantarah, in which case it might be just possible to place Pi-ha-hiroth at Tell Hîr. It seems, on the whole, more probable that pastures near the Nile mouth not far from Ism’ailieh are intended, and that Baal-Zephon is to be sought south-east of Birket Balah.

There are two important notes to be finally considered. The first in Exodus xiii, 17, the second in Exodus xiv, 3. The first states that “God led the people about through the way of the Yam Soph,” “God led them not through the way of the land of the Philistines, although that was near.” The second states that “Pharaoh will say of the children of Israel, they are entangled in the land, the wilderness hath shut them in.” Both these statements appear to me to favour the southern route. The way to the land of the Philistines was, without doubt, that from Zoan to Kantarah, and thence to Gaza, which is still the road to Syria, the only line which can be followed, because there are wells along it, and one which was probably not far from the Mediterranean shore at the time of the Exodus, when Zoan and Daphnai were almost seaports. This route *was* near to the Israelites in Zoan, it was the direct one to Syria, and a very possible one even if they were going to Sinai.

The second passage came vividly to my mind in advancing to Kassasin. There was wilderness on either hand, and if we could have been driven from the Sweet Water Canal we should indeed have been “entangled in the land,” shut in as we were in the desert. The mixed host, if it went out along Wâdy Tumeilât by a branch perhaps of the Nile, *were* going by the way of the Yam Soph. They had their enemies behind, or perhaps north-west of them, and a forced march from Pi-Ramessu and Salahîyeh would have enabled the Egyptians to seize the head of the gulf, as then existing at Ism’ailieh, and to drive the poor fugitives into the sea which was in

front of them ; for the chariots and chariot horses (wrongly rendered horsemen) of Pharaoh could have covered the ground at least twice as fast as the women, children, flocks and herds of Israel.

As we went up the canal we witnessed an Exodus which had something in common with that of Israel. The poor peasants of Port Said and Ism'ailieh had been taught to expect every sort of outrage from the ferocious Franjis. Even when they learned the humanity of the English they were still (as they assured me) "only afraid of the *booms*," or cannon shot. The women, with great bundles on their heads, their blue robes tucked up, their babies hung behind them in their veils ; aged men helped by their sons ; the family property on a little donkey ; the weeping children and the hungry-looking men, recalled strangely the idea of that motley host which accompanied the armed men of Israel ; and the slow progress of the departing Fellahin, even though left quite uninjured by our troops, gave a practical example of the impossibility of Brugsch's theory of a forty mile march. With the chariots of Pharaoh dashing over the pebbly desert to the north, or down the valley behind ; with sand dunes covered only with dry tussocks of grass to north and south, with the swampy river-mouth in front and the sea to the right, the yellow hills of the wilderness beyond the sea, the dry wind from the north-east burning their lips, what position could have been humanly more hopeless than that of the children of Israel when Moses "stretched out his hand over the sea ?"

CLAUDE R. CONDER, *Captain R.E.*

II.

WHEN one has read Mr. Scarth's pleasing paper (*Quarterly Statement*, October, 1882) on the "Route of the Exodus," has one arrived at any probable conclusion as to that route ? I think not. The suggestion is, doubtless, a novelty—that the course of the Israelites from the encampment near Migdol was *westward*. Naturally, therefore, the question may be asked, Where would they be supposed to be going ? Such a course is neither the "way of the wilderness," nor that road to Palestine which is called "the way of the land of the Philistines." So much light is being thrown gradually on this not unimportant biblical subject, that one almost wishes a sort of standard might be set up—a literary Nilometer—to show how far we had safely got in our investigations from time to time.

As one reads, for instance, Herr Brugsch's essay on "The Exodus and the Egyptian Monuments" (1874), and Mr. Greville Chester's paper (1880), one thinks such antagonists can never come to terms. The addenda and notes to either production show how little space of real difference lies between the two historians.

Now there are very reasonable geographical boundaries to the subject, viz., "Ramses" and "the wilderness of Sin." There are boundaries also in *time* for the passage between these two places,—“and all the congrega-

tion of the children of Israel came into the wilderness of Sin, which is between Elim and Sinai, on the fifteenth day of the second month after their departing out of the land of Egypt" (Exod. xvi, 1).

Much has to be accomplished by the historical inquirer, however, within these boundaries. One asks first, What was the object of their whole journey? God told Moses that He would deliver His people out of the affliction of Egypt, and bring them up into a good land, specially Canaan "The Lowlands"). To Moses, doubting his own power, God promised a sign, viz., that the Israelites should worship Him in Horeb.

To reach Canaan from the Delta of Egypt there seem to have been two great roads in frequent use—though there may have been, and most likely were, caravan routes used at certain seasons of the year. Starting both of them from the royal and central city of Tanis (the modern Sâh), the one led by Pithom and Pelusium, and then along the course which Mr. Chester followed, keeping the shore side of Mount Casius, to El Arish; the other through the Succoth district to Khetam and Migdol, and then passing (as does the short desert route now) to the south of the Serbonian Lake, bore up north-east to El Arish. These two routes, but especially the latter, must have been well constructed roads. Armies like those of Seti I, setting out, with chariots and all the impedimenta of war, to fight against the Shasu and Kharu warriors, from a country in a proper state of defence, with protecting and corresponding towers and fortresses along its frontiers, would be sure to be able to commence its march along military roads. Ramses II would not neglect in any way the defence of his frontier on the eastern side, or the communication between his fortresses. Besides this, the great roads leading to the country of the Khita, and those leading through the south and right away to the Euphrates, would be regarded as international undertakings, essential to the development of commerce.

We know from the letters of the court scribes, written from Pi-Ramessu (Tanis), that the celebrated treaty of peace between Ramses II and the King of the Khita was regarded as an epoch in the world's history. One may then conclude that Ramses's reign reached the summit of its glory when this great alliance was formed, and that at this time probably the new city of Pi-Ramessu, adjoining the old Zoan (Tanis of the Greeks), or Zor, and looking over those wide plains and lagoons which Mr. Macgregor so well described in "Rob Roy on the Jordan," as far back as 1868, was built. At Zoan (Zor) we stand on very firm ground. This, the ancient capital of the Hyksos kings, had been abandoned by the kings of the 18th Dynasty, the regenerators of Egypt, but had been again exalted to capital rank by the clever Ramses II. Not that he merely resuscitated Zor, or Zoru (the "strong" place, or places), the central post of those many fortifications which give the name Muzur, or Mazar ("fortified") to the whole district, but he built close to it another city—Pi-Ramessu ("the city of Ramses"), and there he established a fresh "cult," that of "Sutekh, or Baal," a deity of the Hyksos kings—whose blood probably ran in his veins.

This new city, with its marvellous temples, the tributary Israelites—

quartered near to it in the land of Goshen—helped to build. Here Moses faced the proud Pharaoh of his day, and hence went up the first notes of that terrible great cry which told of the execution of the judgment of Jehovah.

We know that the Israelites dwelt in the midst of and mingled with the Egyptians, else there had been no need to mark their houses with the blood; and it is not far-fetched to suppose that there had been for some time, since the day when Moses and Aaron first appealed to them, an excited longing for liberation and freedom amongst the twelve clans. In the treaty (already alluded to) between Ramses and the Khita, there is a curious allusion to runaways and fugitives from Egypt, who might be caught in the Khita country, and their extradition. One may almost imagine that even then there were signs of a coming rising on the part of some distressed tributary people.

Are we obliged to allow only three days after leaving their homes before the Israelites make their encampment at Pihahiroth? The Bible account does not say so! Still, as Brugsch has shown, the encampments successively mentioned agree wonderfully well with the stations mentioned in the Report of a certain scribe sent out to retake two fugitive servants, of which he gives us a translation. The writer lived at Pi-Ramessu, and wrote in the reign of Mineptah III (*circa* 1266 B.C.). The stations mentioned by him are the "fortress or barrier of Thuku" (Sukoth), in one day's journey, and "Khetam," after two days. At Khetam the scribe receives news that the fugitives have already passed the "rampart" to the north of the Migdol of King Seti Mineptah. Now I don't think this "Report" proves anything as to the course taken by the writer on his journey one way or the other, or as to the time spent. What he writes suggests, possibly, that he first took the upper road from the royal city towards Pitom, then turned south and came into the great royal road at one of its stations, "Khetam," where further and perhaps conclusive news of the fugitives was received. Still it gives us "Etham" and "Migdol," and it mentions, too, that the report which settled the course of the fugitives came from men who had come from the "sedge city (city of Suf)."

What has been learned about Succoth then? The ancient divisions of Egypt—beyond that division with which all the royal buildings and tombs make the most unlearned traveller in Egypt so familiar, "Upper" and "Lower"—were retained by the Greek conquerors, and called "nomes," distinguished from each other by names which were supposed to translate the Egyptian designations into words harmonised to the Greek ear. In the "Sethroitic" nome, the north-easterly division of Lower Egypt, was preserved the Egyptian word which signified "the region of the river mouth," and was applied to the whole region of the north-east Delta. The capital of this nome Brugsch thinks to have been Pitom (the "Heracleopolis Parva" of the Greeks), which, as though there were more than one, is distinguished as "Pitom in the country of Sukot." The whole of this district, the eastern border-land, was full of lakes and waters, and these, we may be certain, have changed in form and volume in the intervening centuries, owing to the neglect or destruction

of dykes, canals, &c. It formed the camping ground of various aggressive tribes from the East, and derived its foreign name, "Suko" or "Sukot" (Thuku or Thukot), meaning a "tent" or "tent camp," from this fact. In a letter quoted by Brugsch (vol. i, 247) there is a report of an inferior officer as to the permitting Bedawîn of Edom to pass through the fortress, "Khetam of King Mineptah-Hotephimaat" (Mineptah II), situated in the land of Sukot, near the lakes of the city of Pitom, which is situated in the land of Sukot, in order to pasture their flocks, &c., on the lands of Pharaoh. The administration of these eastern marches is clearly set forth in the Egyptian papyri, having its bureau at the royal city Pi-Ramessu; and the foreign people again were under the control of regularly appointed officers of their own, who were responsible, we may suppose, to the central Government of the country.

Succoth, then, suggests a "region," rather than any one city; and at some fixed point in that region we may suppose the Israelites to have rallied when Moses sent out his final summons from Pi-Ramessu, and there to have made their first encampment.

For "Etham" we may require some more definite localisation. The children of Israel are to be led to the land of the people called "Canaanites;" the great royal road, made famous as a road of victory in the annals of the kings of the 19th Dynasty, leads there.

Brugsch, without hesitation, assimilates the Egyptian word Khetam (a "fortress") with the Bible name Etham. Of this Khetam, situated in the province of Zor, there is a representation on the walls of the Great Hall of Seti I at Karnak. The city appears built on both sides of a river (the Pelusiac branch of the Nile probably), and these two portions are connected by a bridge. Hard by is the town "Tabenet," for which the Greeks found a name, Daphnai, perpetuated in the Tel-Defenneh of to-day, with its ancient canal, and the ruined town beyond this canal. Mr. Chester has fully described Tel-Defenneh (Dephneh) and its surroundings: he has pointed out the ancient dyke leading across the artificial lake to the west of the Tel, in the direction of Pi-Ramses, an easy two days' journey, its commanding position on the "edge of the wilderness," and then its propinquity, less than a day's journey, to the spot which he takes to be Migdol.

El-Kantâra, on the canal, is evidently an ancient place, and its name (the "bridge," or "ford") suggests that in this very name we have preserved for us sufficient evidence that here was the highway by which the Egyptians passed on through swamp and intricate country to Syria. A direct line makes it about ten miles from Tel-Dephneh to Kantâra. There are ruins very near Kantâra, which seem to Mr. Chester to be those of Migdol, as probably as those suggested by Brugsch, hard by Tel-es-Samût. But still more does Tel-el-Hîr seem to him to be, from its position commanding the marshes, and from the extent of the ruins (amongst which are the remains of a massive tower), the likely Migdol. Migdol means "tower," and we know, both from the monuments and from the Bible (cf. the proper reading in the margin of Ezek. xxix, 10), that, like as

in the case of "from Dan to Beersheba," "from Migdol to Syene" described popularly the boundaries of Egypt.

Brugsch places at Tel-el-Hîr, quoting from Lepsius, Ha-u'ar ("the house of the leg," a name found in other parts of Egypt, and connected with the worship of the leg of "Osiris"), and points out Ha-u'ar's positive identity with Avaris, the great frontier city of the Hyksos kings, where was fought the battle which resulted in the expulsion of the Hyksos kings from Egypt.

Brugsch goes further than this, and argues the probability of this Hau'ar being the "Baal-Zephon" of the Bible—"Sutekh," the tutelary god of the Hyksos, being the same as the Phœnician "Baal." If this be so, we may place, *conjecturally*, Pihahiroth (the word means "entrance to the gulfs") near, opposite to, in the face of, "Baal-Zephon," and find Migdol near to or at El-Kantâra;—or might we not suppose Migdol to be the tower of some outlying work protecting Baal-Zephon?

To-day, as one steams up the canal to Port Said, it is difficult looking westward to distinguish Lake Menzaleh from the Mediterranean, or, as one gets beyond Kantâra, to settle for one's self, looking away towards the north-east, where to place the coast-line of the long-wished-for sea. The brightness of the air and the glare on the sand doubtless add to the confusion of objects. Still I fancy that there must have been always such an intricate spreading out of lagoons and shallows and marshy lands to the east of the Pelusiatic branch of the Nile, and just within the boundaries of the shores of the Mediterranean (from which the Tels and Gebels would rise like islands), that the term "sea" might come to have a somewhat indefinite application.

If Baal-Zephon be the same as Ha-u'ar, and if this again agrees with Avaris, I think that much stress should be laid on the inscription in the tomb at El-Kab (Upper Egypt) of the Aahmes family. The inscription, as translated by Brugsch (vol. i, 283), tells us this:—He was a captain of the sailors to the king who founded the 18th Dynasty, and who roused Upper Egypt to war against the aggressive foreigners, the Hyksos, who had so long held Lower Egypt. I have alluded already to the capture of Avaris. Avaris, Takem, and Sherohan are all mentioned as towns besieged and captured. But of the battle at Avaris it is said that they fought *on the lake Pazet-ku*.

But where are the Israelites? It is after their encampment at Etham that they are told to *turn*. But which way? I suppose we may accept the verdict of critics who see in Exodus xiii, 17, 18, the hand of a later compiler annotating Moses's narrative. His explanation then would run thus:—"The march of the Israelites was commenced along the 'way of the land of the Philistines.' They marched in military order. God, however, altered their course, so that they turned out of the royal road, with its stations and fortresses all in due state of defence against incursions of Phœnicians or Arabs, and He led them through the wilderness of the Red Sea." It is this turn, either at or after Migdol is passed, towards Pihahiroth—"the entrance of the gulfs" (which, I take it, was situated on a road leading up

from Memphis to the north-east, and running parallel with the canal, by which Aahmes would advance in his ship against Avaris, the canal of which we have such good evidence in somewhat later times)—which would suggest to Pharaoh their entanglement in the land. The road was an intricate one, owing to the nature of the ground, and beyond this watered country, running down into it, was the desert—that feature of the whole land of Egypt which is most remarkable. What Jehovah did for His people is, I think, described in Exodus xiv, 16. The lost way does not matter; a new road is made through the midst of the sea, the waters are divided, and Israel goes through on dry ground.

If one takes Israel northward from Kantâra and encamps them where Mr. Scarth places them (a distance of over twenty miles), and then does not adopt *his* proposed route, but a route which allows Mount Casius to be Baal-Zephon,—although by Mr. Chester's help we may understand far better the machinery of the miracle,—we are almost forced to turn them back after the destruction of the Egyptians along the same route. As an alternative we may take them past Mount Casius (the causeway along the shore not being broken through as Mr. Chester found it to be), between the Mediterranean and Lake Serbonis, make them double Lake Serbonis, and then, pursuing the line taken now by caravans from Cairo to Gaza, come into such a track as that by which we are led in "Eothen" from Suez to Gaza. Between the going out from Pi-Ramessu to the destruction of the Egyptians, and from that morning till the encampment was made in the wilderness of Sin, there is an abundance of time for marching and counter-marching. One need not put much pressure, then, on one's self in this respect—our difficulties are all topographical. This portion of the journey may be called the "Red Sea portion," of which the boundaries are conjectural as to localisation.

I do not see why we should regard the narrative in Exodus as continuous. For instance, I think that an entirely fresh paragraph commences after the account of Miriam's song (Exod. xv, 21). There is in the life of the people a new departure from the "great overthrow of Pharaoh." The corresponding passage (Num. xxxiii, 6–9) is confusing, as also is the designation "wilderness of Shur" (the name of that district through which the Egyptian Hagar passed when she fled from Sarai, and in which is placed the well Beer-lahai-roi). Who is the writer of Numbers xxxiii? Is he not a different person from the author of Exodus xiii, and from the author of Exodus xv? Between the author of Exodus xv, 22, and the author of Numbers xxxiii, 8, there is in common, however, a certain "three days in the wilderness," and from the narrator in Exodus we gather that they were marked and made memorable by scarcity of water. It is at Marah *after* "the wilderness" that we reach a definite place.

May we not, then, legitimately look to the other terminus of this portion of the journey, and see whether we have any certain points to make *from*? And may we not do well to take as a guide here the lamented Professor Palmer? The object of Moses is now to reach Horeb. The wilderness of Sin was reached, we know, one month after the departure from Ramses?

Professor Palmer gives us ("Desert of the Exodus," vol. I, chap. xiv) the conclusions arrived at by the members of the "Sinai Expedition," 1868-9. I do not know whether he modified his views as to the starting-point of the Israelites; I lay stress only on his itinerary for them from Ayún Músa.

They are moving from the Red Sea: Ayún Músa, with its ancient traditions, is a halting-place (on a straight line it would be about sixty-five miles from El Kantâra). What does one see as one looks northward, with one's back to the blue water of the Gulf of Suez, towards the desert and the desolate lines of Jebel ser Ráhah and Et Tih? The "wall-like escarpments" are the *salient features* of the landscape, and we need not wonder at the name "Shur" (in Hebrew signifying "a wall") being given to this track of the desert.

For three days from the "Wells of Moses," the ordinary traveller with baggage has to traverse a waterless region, till he comes to a small clump of dwarf palms, looking in the distance merely like a single bush, which overshadow Ain Hawwárah, a small pool with no water fit to drink. At a distance of two or three hours in a southerly direction you come, however, to the green tamarisks and grand old palm-trees of Wâdy Gharandel, and its perennial stream! Here or hereabouts Elim may be placed, and the present fertility of the spot, in the midst of a district which neglect and the destruction of vegetation tends to render dry and barren, is almost a guarantee for the antiquity of this fertility. The Israelites removed from "Elim" and encamped by the "Red Sea." It is exactly what one does now-a-days! If one chooses the Wâdy Feirán route to Sinai, one crosses from Wâdy Gharandel into the beautiful Wâdy Taiyebah, and, without over fatigue, on the same day one gets to the sea-shore a little north of Rás Abu Zenímeh, having turned the black headland of Jebel Hammân Far'ún ("Pharaoh's hot bath"). This strip of desert, fringing the coast south of Wâdy Taiyebah, may reasonably be taken for the "wilderness of Sin."

Making these remarks I don't lose out of sight that the whole narrative would be simpler if from Etham we could bring the Israelites by Lakes Balâh and Timsâh to the Bitter Lakes, and place the passage of the sea somewhere in the neighbourhood of Suez. Only as yet I do not think that we have got satisfactory sites for "Pihahiroth" and "Baal-Zephon," even if there would be no great risk in imagining a "Migdol" in these parts. The starting-points of the Exodus I think we have found, and I think that Professor Palmer has given us firmness of footing for the "wilderness of Sin." Little by little we may come to learn more of the Exodus, giving due weight to every reasonable theory which may be put forth, and not trying to make what *we* think should have been harmonise with what really was.

C. PICKERING CLARKE.

III.

THE following letter was written and published in the year 1869, on the author's return from a journey to Sinai:—

"I thought that all well-informed persons, who had turned their attention to the subject, were convinced by this time that Cairo had nothing to do with the passage of the Israelites. Avaris was the Zoan of the Pharaohs, and the capital, at least during harvest, of the provinces of Lower Egypt. But every traveller does not go into Lower Egypt, and but few examine the frontier of Goshen, which Robinson long ago identified with the modern province of Shurkeeyeh. Consequently, we still have 'travellers' who try hard to believe that the great event took place at that part of the Red Sea which they saw with their own eyes at Suez. This easy theory is supported by swallowing Mohammedan traditions and names, which are just as worthless in Sinai as data for Scriptural topography, as Popish traditions and names are in Palestine. The 'Valley of the Wandering,' south of Cairo, and the mountain of Attaka, had' no more to do with the passage of Israel than Marylebone Lane and Primrose Hill; and if people would but stick to their Bibles instead of servilely following Josephus and the Mohammedans, we should never have heard a word about the Israelites being impeded; 'entangled,' 'shut in,' or turned, by a mountain at all. Even if Holy Scripture had said they were entangled by a mountain, it could not possibly have been Attaka: for they could not have reached it in time, and if they had, it could never have 'entangled' anybody. Your correspondent says he examined it, but the value of his examination is not great, if he did not discover that the mountain does *not* run down sheer into the sea, as it appears to do from Ayun Moosa, but leaves, between its foot and the sea, a level much-used road, a quarter of a mile broad at its narrowest part, and which consequently could not 'entangle' or even hinder any number of fugitives from whichever side they approached it. The idea that they came from Cairo is to be similarly accounted for. 'Travellers' come from Cairo, and *therefore* (for there is no other reason whatever) the Israelites came from Cairo. Zoan, now called San, lies far out of the route, or rut, of such travellers, and *therefore*, in dragoman's logic, could have had nothing to do with it.

"But granting that Zoan was Avaris, and that Abou Kesheyd in the Tumeylatt, was, as Lepsius has shown, the approximate site of Raamses, we have the true starting-point, and the whole narrative, examined on the spot, becomes easily intelligible. Leaving that rendezvous for the Highlands of the Patriarchs, the Israelites struck east by north, or east-north-east by the ordinary way from Egypt to Palestine. On reaching the edge of the desert, near the Serapeion on the Watershed, south of Timsah, they were 'turned' by command, and consequently got on the western shore of that arm of the Red Sea which then ran up near to that point. There they were surrounded by the salt lakes, mirages, marshes, and moving sands, which still 'entangle' any man who wanders in that region. They spread themselves along the shore, weary, disorganised, and confused. There they were overtaken by the angry king. No doubt he had attempted to intercept their north-eastward march by running his chariots into the desert by the Kantâra route, and finding the people had turned southward, he exclaimed that they were entangled by the quicksands,

and following joyfully he came up with them late that evening on the shore.

"At or about fifteen miles north of Suez there runs out towards the desert the only bluff on that whole frontier, Gebel Geneffa, on which the Migdol, or watchtower, would naturally stand to guard the country; near it, the Bible tells us, was Baal-Zephon, and exactly indicated by these marks near the station of Chalouf en Terraba, as I have no doubt, the great deliverance took place. Not, indeed, as depicted in our nurseries, in a long narrow passage across a sea eight miles wide, as at Ayun Moosa, which would have occupied a week at least, but, as afterwards at Jordan, by the drying up of so many miles of the narrow arm of the sea as would permit the vast and disorderly host to rush across, 'broadside on,' in the short time they had to do it in, 'before the morning.' The other stations now all fall into their proper places. Exactly 'three days' journey' brings them to the only *healed* water, or sweet wells, on this coast of the peninsula, not the bitter puddle of Ain Howâra, which is the 'Marah' of travellers, but the rich fresh-water stores of Abou Soueyra. One whole day's journey more, and Gurundel and Oosait are reached. Almost all allow these to represent Elim. The 'encampment by the sea,' at Abou Zuleema, has never afforded room for controversy. From thence, another difficult and therefore short day's march, round the tide-washed bluff, and they enter the pasturages of 'Sin.' Dophka then followed, *i.e.*, the plain, in the lower part of the Wâdy Feiran, near the sea, where, then as now, 'there was no water.' Alush, also waterless, would be that great plain at the entrance to the granite district of Horeb, where the Amalekite defile begins, with its easily identified hill (not mountain), standing athwart the valley, from which Moses, Aaron, and Hur watched the fight; and at the end of the defile, the oasis of Replidim, or Feiran proper, watered by the streams which drain Alayatt and the northern slopes of Serbal. From thence it is just one day's journey from one gate to the other, along the Wâdy el Sheykh; and after passing the Ootaieyeh gate, they were in the Midbar, or 'pasturage' of Sinai, under which, in the plain of Er Raha, they assembled 'on the third day.' It is of no use referring to maps, for not one of them is worth a rush.¹

"F. GELL."

IV.

I HAVE read Canon Scarth's article in the *Quarterly Statement* with much interest, and all the more from having recently made the march from Ismailiya to Cairo. I have worked out the subject, and find that the march could have been accomplished without difficulty in the way suggested; of course I do not absolutely accept the theory, as one would not like to do that without a careful examination of the arguments on both sides.

¹ P.S.—March 25th, 1883. This could not be said now; but it was true fourteen years ago, when this letter was written, that not one map of Sinai existed worth anything. Subsequent investigations have confirmed the view of the route of Israel here indicated.—F. G.

I do not think it would be fair to assume that the tribes marched in a compact mass, and, for the moment, I take the number as given in Exodus, *i.e.*, 600,000, or an average of 50,000 to each tribe.

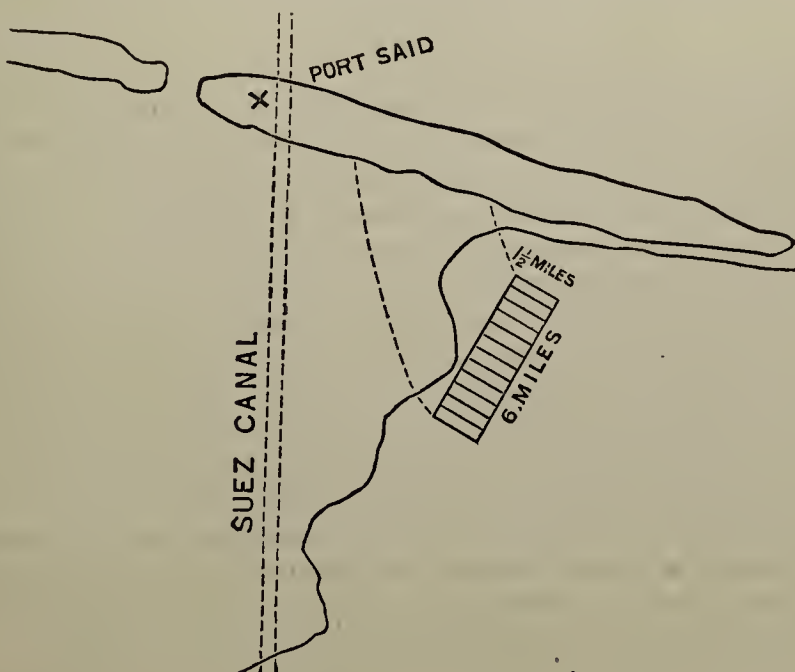
An English regiment of 1,000 men can be *camped* on an area of 320 yards by 150 yards, with their baggage, &c. A similar space is of course ample to allow the same number of men to *march in*, allowing for a considerable amount of straggling, and therefore the whole of the tribes could march or camp on an area of nine miles in length by one mile in width thus:—



This does not seem too large a space to allow, considering the nature of the people, and the certainty that they must have had transport animals with them to carry food and water.

The first day's march, from Zoan to Succoth, would be about fifteen miles ; the second, from Succoth to Etham (a little beyond Kantara), rather more than the same distance.

Here it is assumed that the column turned northwards instead of following what was then, and is to this day, the direct road to Palestine. Pharaoh and the Egyptians had heard of the flight, but were still at least one march in rear. Another day's march brought the tribes to the eastern side of the lake, and here, no doubt, with the rumour that the Egyptians were in pursuit, it is probable that the wanderers would have closed in, and the column, when they halted for the third night, have assumed a deeper and broader form. I have carefully measured the distance on the map



published by the Intelligence Department, and there is plenty of room for the column so formed to encamp, or rather bivouac : for it appears to have been the same night that the alarm came from the rear, and the advance was ordered. Each tribe would then move to its left, and wheel a quarter circle to the right, passing into the dry ground, as the east wind drove away the lake westward. The passage of so large a body of men and animals would doubtless cut up the surface, and it would scarcely come within the category of a miracle if Pharaoh's chariots were unable to cross the bed of the lake and were overwhelmed by the returning water. There would be plenty of room for the whole Israelite force on the bank of sand. There is to my mind one difficulty : when the west wind blew, and the sea returned to its place, I do not see how the people could have regained the road to Etham, unless the sea again partially went to the westward.

If the large scale map published by the Intelligence Department is consulted, the whole thing comes out very plainly. In this map there is a Bir Murra, marked a little to the north-east of the Bitter Lakes, which would agree with the position given to Marah according to Canon Scarth's theory of the Exodus.

Of course, if it is assumed that the numbers given in Exodus are too great, the whole matter would be still simpler.

I have no doubt that there is a vast deal of interesting information to be obtained from a careful exploration of the south shores of Lake Menzaleh, and, so far as I know, it has not up to the present been investigated as it deserves. Perhaps after the Palestine Exploration Fund has completed its survey of the East side of Jordan, it may be able to get funds to extend its researches into the parts of Egypt which are more particularly connected with the history of the Jewish people.

C. M. W.

NOTES.

Kadesh on Orontes.—I have not yet been able to write on this subject, but would wish to note that the objections raised by my friend Rev. H. G. Tomkins to the new site are based on the supposition that the Lake of Koteineh existed in the time of Rameses II. The lake is artificial, and depends on the great dam, which has all the appearance of Roman work. According to the Talmud the lake was made by a Roman emperor, and I see no reason for doubting this assertion. There is no mention of any lake in the account of the attack on Kadesh itself, nor do the Egyptian pictures appear to give any representation of the lake. They speak only of the river Orontes, and show Kadesh between that river and the affluent on the north—just as Tell Neby Mendeh is situated at the old site of *Kedes*. As regards the name Mendeh, or Mendau (as Robinson calls it), it seems possibly to be derived from the name of the Egyptian deity, Mentu or Mando, the war-god whom Rameses invokes in the epic of Pentaur. I may also note that the name of the Hittites seems to survive in Tell Hetteh, in the valley of the Eleutherus, west of Kadesh on Orontes.

The following points in the *Quarterly* for October, 1882, I have been unable, through duty and illness, to attend to previously.

Jannes and Jambres, p. 234.—The occurrence of the name of Moses in documents of the 19th Dynasty in Egypt is not considered by Egyptologists to have any connection with the great lawgiver. Canon Scarth will find, by reference to the able paper at the end of Vol. I of the "Speaker's Commentary," that the views of Mr. Dunbar Heath were considered by Egyptological authorities many years ago and were then rejected. The name Moses seems probably to be of Egyptian derivation, signifying "water-child," and the early chapters of Exodus (as well as those in Genesis and in Job referring to Egyptian matters) have been shown to be full of Egyptian words. The name Moshî, in Egyptian papyri, and applying to an island, is probably connected with Horus the rising sun, represented as coming out of the water, rather than with any historic personage. In the same paper the story of Perseus and Andromeda is referred to Egypt. The *Æthiopians* of Herodotus, however, were found in the east as well as in Africa, and the tale is connected with Joppa, where Andromeda is supposed to have been bound. It is considered to be a sun-myth by the school of Max Müller, and Erythras, in this case "the ruddy one," is probably the rising sun. The name red is often given to solar heroes, as, for instance, in the case of the Indian Rohita.

Asheroth.—It was not my intention to convey the idea that the Asherah was of stone. It is well known to have been of wood. It is supposed to have been similar to the sacred tree of the Assyrian monuments, the emblem of *Asshur*, and its lineal descendant—though not exactly similar in form—is the maypole. The *Metzeb*, or "pillar," was the stone monument (cf. Levit. xxvi, 1).

The Garrison.—I ought to thank my friend, the Rev. W. F. Birch (p. 266), for correcting me on this point. The words, however, are connected, and the Hebrew *Metzeb* becomes *Nusb* in Arabic.

It is quite true, as stated by Mr. Birch, that the word in 1 Sam. xiii, 3 and 4 is נֹצִיב, and it is rendered "pillar" in the Speaker's Commentary. It would, however, have been more satisfactory if Mr. Birch had also stated that the word rendered "garrison" in five other instances in this episode, is as I stated, מִצֵּב (viz. : in xiii, 23 ; xiv, 1, 11, 12, 15) ; the latter word is rendered "pillar" in other passages of the Old Testament.

Mr. Birch does not agree to my view that Jonathan insulted a Philistine sacred *stele* because of the words "and there was a trembling in the host, in the field, and among *all the people, the garrison* and the spoilers they also trembled, and the earth quaked so it was a very great trembling," (xiv, 15). Mr. Birch says "the vibrations of a pillar cannot here be recorded." It is evident, however, that the writer represents man and nature trembling equally, and if there was an earthquake the Menhir would certainly have rocked. It is, however, possible that the words "all the people : the garrison" should be rendered otherwise (הַעַם הַמִּצֵּב), meaning "all the people *of* the pillar"—that is, the defenders of the boundary stele. Thus the only objections raised to the proposed explanation of the word rendered "garrison" seem to be removed.

Holy oil.—The authority for the statement in the "Handbook to the Bible" is not stated as clearly as it should be. It is, as said at the beginning of the paragraph, Maimonides commenting on Kerithoth. The statement must be taken for what it is worth, but Maimonides is a very careful authority, and his statements are generally based on older authority.

Rude Stone Monuments.—I hope to be able to write more fully on this question later. A great deal of light is thrown on the subject by a study of Indian monuments, and of traditions connected with cromlechs and menhirs. There is plenty of evidence of sepulture in dolmens, where covered with cairns; but there is also plenty of sound evidence connecting cromlechs, circles, and menhirs, with sun-worship and nature-worship, and existing customs prove this beyond reasonable doubt. These monuments are of many ages, and are still erected by Arabs and Hindus, as well as by Polynesians, and are found in all parts of the world, including North and South America. Great circles were used as meeting places and council places; heroes were buried in such sacred spots; but, nevertheless, the evidence of sacrifices having been offered, and observations of sunrise having been connected with menhirs, is quite as full and sound as that connected with the sepulchral theory; and the connection in the Bible between early worship and circles, menhirs, and dolmens is sufficiently clear.

Rock Rimmon.—I should be much obliged for further information as to the name *Rummâr*, or *Rummân*, collected by Mr. Rawnsley. The care which he took to avoid leading questions, and the assistance of so excellent a guide as the late Mr. Selami, makes the collection of the name valuable. I have not, however, been able to find out where it applies, or what is the proper form of the word, whether with N or R at the end. My guide in 1881, when I re-visited this valley, did not know this name, even though I asked for it, and although he gave me nearly all the other names collected by Mr. Rawnsley and a few besides. The word *Rummân*, meaning "pomegranate," is common in Palestine—indeed is one of the commonest of the descriptive names in the Survey lists.

Mount Ephron (*Quarterly*, 1883, p. 52), Mr. Birch seems to identify with Ephrath. It may be noted, however, that the words are radically different, viz. :—אפרת and עפרון. It is, therefore, not a mere question of termination.

C. R. C.

NOTE ON THE "KEY TO EZEKIEL'S PROPHETIC DIVISIONS."

(See *Map of W. Palestine, Special Edition, illustrating Old Testament.*)

If it be permitted—to an always interested reader of the *Quarterly Statement*, who has geography on the brain, having been instructed therein from his earliest youth up, until the features of the earth and its divisions are as familiar to his mind's eye as A B C, and who has of late years, not once,

but many times, pondered this same impressive subject of Ezekiel's "*Prophetic Divisions*"—to assert an expression of his views differing by 34 minutes of latitude from the apparently authoritative holding of the Palestine Exploration Fund, I venture to write down my impressions.

"34° 34' N. latitude" is the northern boundary of the northernmost of Ezekiel's divisions, as recorded in the Old Testament edition of the Map of Western Palestine.

34° N. latitude is the result which my own calculations brought out not many weeks ago.

And on these grounds :—

1. "Hamath, Berothah, Sibraim" (Ezek. xlvii 16). "Hamath" is explained, in this and the following verses, to be not the town, but the territory, of that name.

2. "Berothah," or *B'rât-h*, בְּרוֹתָה, is, beyond possibility of question, *Beirât*—lat. 33° 55' N.

3. "Sibraim," or *S'brim*, סִבְרַיִם, may be *Shebruch* on the west slope of Lebanon, at the entrance of the pass on the north of Jebel Sunnin, situate within two miles of the head waters of the Leontes—lat. 34° 1'.

4. There follows upon the mention of these places a specification of their locality, as being "between the border of Damascus and the border of Hamath," *literally*, "between the border of Damascus and *between* the border of Hamath,"—that is, in English, they are *points on the common border* of the districts named. Now the *natural border* between the jurisdictions of Hamath and Damascus practically coincides with the 34th parallel of N. latitude—being the watershed between the basins of the Orontes and Leontes. Moreover, *the* Leontes valley is the natural commencement of the valley of the Jordan.

The beautifully clear and detailed map of Palestine in Keith Johnston's "Shilling Quarto Atlas" is all that is needed to elucidate this point. The following facts will be therein clearly seen. The four main heads of the Leontes rise respectively (from west to east) in 34° 1', 34° 9', 34° 10', and 34° 2'. The two main heads of the Orontes rise each in 34° 5'. And the watershed, starting in the crest of Lebanon in 34° 10', runs south to 34° 2', then north-east to 34° 10', then south-east to 34° 2', or even 34°, east of Baalbek. This is a more "natural" boundary than the "northern base of Mount Lebanon" in 34° 34'. *The ridge of Lebanon is prolonged north of the 36th parallel, to the mouth of the Orontes.*

5. In verse 15, the border is defined in *general* terms to be "from the great sea, the way of Hethlon, as men go to Zedad"—*literally*, "for going to Zedad." Now Zedad, or *Ts'd'd-h*, צֶדָדָה, is—again beyond possibility of doubt—*Sudud*, on the edge of the Syrian desert, in lat. 34° 21'.

It may be noted, in passing, that this is the nearest point mentioned to the 34° 34' of the Map of Western Palestine. It is, however, *not* Zedad, but the "way to Zedad," that is given as a point on the border.

6. "Hethlon" I do not claim to identify,¹ nor have I ever seen any identification proposed. But the "way of Hethlon, for going to Zedad,"

¹ See, however; the note appended at the end of this article.

may well be that which lies through the opposite pair of steep and rugged mountain passes in the ranges of Lebanon and Antilebanon,—penetrating the former in $34^{\circ} 1'$, the latter—ten miles due east of Baalbek—in *precisely* 34° N. latitude. This route is the nearest way to *Sudud* for one starting from *Beirût*.

7. To return to verse 16. The account continues, "Hazar-hatticon, which is by the coast of Hauran." The "*village*" (H'ts'r, *an enclosed place*) "of *Tikân*"—חצר ה תיכון—I consider to be not unreasonably represented by the modern *Kury-e-teîn* (Kury being the same as קיר, *Kîr*—from root *Kâr*—meaning *an enclosed place*)—lat. $34^{\circ} 9'$.

Kuryeteîn is the *easternmost* place on this latitude, being on the very edge of the desert. Moreover, it is

8. "*beside Hauran*." The mention of Hauran here, as a place near the northern boundary of the land, excludes the Jebel Hauran, the Bashan or Auranitis of the ancients, in $32^{\circ} 45'$. So also does the mention of Hauran in verse 18, where it is named as *north of Damascus*. We may, therefore, fairly conclude that, beyond possibility of doubt, the H'w'r'n—חורן—here intended is the immediate neighbour of Kuryeteîn on the north-west, lying half-way between that place and *Sudud*—to wit, *Hauwarin*, in lat. $34^{\circ} 15'$.

9. Lastly, before finally summing up the border, once more, as the common border of Hamath and Damascus, the account specifies the precise point where the boundary line starts "from the great sea." And it seems not altogether unreasonable to identify this point, given as "the village" (Hazar, H'ts'r, as above) "of עינן," or (xlviii, 1) "עינן," with the village and bay of *Juneh*, *situate within one minute of the 34th parallel*. This identification, in itself perhaps weak, is yet strong when considered in the light of the above cumulative evidence.

Briefly to recapitulate, the evidence is as follows :—

The 34th parallel is a mean between the latitudes of *Beirût* and *Kuryeteîn*, respectively the most western and most eastern places referred to in the definition of the boundary. The former (just below the parallel), mentioned as being an important place lying very near the border-line; destined, moreover, to retain its name unchanged. The latter (just above the parallel) being that one of the few scattered desert villages which is nearest to the eastern extremity of the border-line. This same 34th parallel, moreover, cuts all the other places mentioned as points on the boundary; while it is the nearest possible conventional line which will at the same time preserve the natural physical divisions of the country. Lastly, if $34^{\circ} 34'$ had been intended, why should mention have been made of *Beirût*, a place distant more than *forty* miles, when a place fully as important, namely, *Tripolis*, lies within eight miles?

Assuming, therefore—what is certainly the plain inference from a careful consideration of the whole passage, Ezekiel xlvii 13, to xlviii 29—that a line due east and west is intended (and here I am at one with the "Key to Ezekiel's Prophetic Divisions"), it follows that, unless either the validity of the above identifications be disproved, or a case equally strong be made



THE NORTHERN BOUNDARY OF "EZEKIEL'S PROPHETIC DIVISIONS."

out to establish some other result, the boundary line indicated is the 34th parallel of N. latitude.

Some may be tempted to imagine that this is but a trifling point ; but if, as many believe, and as the whole of the great work undertaken by the "Palestine Exploration Fund" seems plainly to indicate, Britain be the Divinely ordained instrument for effecting the restoration of the Jews to the Land of Promise—these investigations may become of paramount value.

APPENDED NOTE.

Since writing the above it has occurred to me that it may, after all, be possible to identify *Hethlon*. If there be any reasonableness in the following proposed etymologies, it is more than probable that *Hethlon* is only another name for *Baalbek*. I submit the etymologies for the consideration of Hebrew scholars.

BAAL-BEK.	HETH-LON (חתלון).
(1) בעל, בקע = to cleave, break, rend ; whence בקעה, <i>El Beka'a</i> , "The Valley."	(1) חתת = to break or crush ; לון by contraction for לאון, "for Ōn"—Ōn being another designation of the sun-god, Baal.
(2) בעל, בכה = to weep.	(2) <i>Same</i> , only with the derived meaning for the root חתת = to alarm, be terrified.

In the first case the meaning of the two names will be "The Breach of Baal or Ōn." In the second case, "The Sorrow, or Terror, of Baal, or Ōn." If either of these meanings be established, we have at once the identification of the else unknown "Way of Hethlon ;" the track, namely, leading from Beirût and the sea across the steep ranges of Lebanon and Anti-Lebanon, with the majestic ruins of Baalbek lying between, to Sudud on the edge of the Syrian desert.

I may further add that what I have lately learnt from a friend, who has himself ridden along the Syrian coast, about the continuity of the Valley of Coele-Syria, with scarcely any perceptible watershed between the Orontes and the Leontes, has in no wise affected, in my own mind, the striking nature of the identification set forth in my article. May I venture to hope that the subject may not be left altogether unnoticed ?

"OXONIAN."

SILOAM AND THE POOLS.

THE newly-discovered aqueduct "in connection with the Fountain of the Virgin, which apparently carried water direct to the lower Pool of Siloam" (1882, 4), seems to me to supply a missing link and to clear up an important question. I was of opinion four years ago (1879, 180) that "the waters of Shiloah" had to do with the Virgin's Fountain, and yet could not

have flowed along the Siloam tunnel, as that seemed to me to be undoubtedly the work of Hezekiah. Professor Sayce (1882, 62) fixes the date of the Siloam inscriptions as not later than the time of Ahaz, for the two following reasons:—

- (1) "As Shiloah signifies 'a conduit,' the tunnel with the inscription in it must have existed before the time when Isaiah viii 6 was written, and have given its name to the locality."
- (2) "The fact that the reservoir is called simply 'the pool' in the inscription is one I cannot easily get over. If other similar reservoirs existed at the time in Jerusalem, as we know they did in the time of Isaiah, it is difficult to understand how it could be called merely 'the pool,' and not 'the Pool of Shiloah' or 'the King's pool,' as in Nehemiah iii, 15, and ii, 14."

On the assumption that the newly-found aqueduct really does lead from the Virgin's Fountain, we may safely assert that it is more ancient than "the Siloam tunnel," since it would be unnecessary after the latter was completed. The true explanation, then, seems to be that in the time of Ahaz (and probably long before it) the waters of Shiloah used to flow from the Virgin's Fount along the lately-discovered aqueduct into a pool (for this very reason called the Pool of Siloam), represented by one of the two present pools. Thus this new discovery shows that point (1) is a fallacious argument. The tunnel need not have existed in the time of Ahaz for the waters to flow along it, as there was already existing another aqueduct along which they might and undoubtedly did flow. It also solves what in my opinion was a very great difficulty, viz., how to apply to a locality near Ain Silwan *all* the various passages where Shiloah Siloah, and Siloam are mentioned in the Bible and Josephus. I am glad, therefore, to come back to the popular opinion (1878, 187) about Siloam.

Point (2) seems to be answered by 2 Kings xx, 20: "Hezekiah made a (Heb. *the*) pool and a (Heb. *the*) conduit, and brought water into the city." This king is emphatically stated to have made *the pool* (and the inscription speaks of *the pool*) and *the conduit*, though both a pool and conduit are named earlier (Isa. vii, 3, 8), in which place the prophet need not speak proleptically.

Without question, then, the canal seems to me to be the work of Hezekiah, and to be referred to in two passages in the Bible, 2 Kings xx, 20, and 2 Chron. xxxii, 30. I anticipate that the wording of the inscription will finally be allowed to confirm the identity of this canal with these works of Hezekiah.

On page 148 (1881) apparently,

המוציא (5) represents מוציא in 2 Chron. xxxii, 30.

מאתי (5) represents למטה in 2 Chron. xxxii, 30.

Thus Captain Conder seems to me to win his point (which I have previously questioned), viz., that Gihon in the latter passage is the Virgin's Fountain, as it certainly seems to be in 2 Chron. xxxiii, 14. After this I

must concede that Gihon in the third place (1 Kings i, 33, 38) is also the Virgin's Fountain.

I give up at once the identification of Enrogel with the Virgin's Fountain, and of Zoheleth with M. Ganneau's Zahweileh. The "overwhelming evidence" (1878, 187) claimed in their favour is apparently fallacious. Three points only need be mentioned now, viz. :—

- (1) As to the *stone* of Zoheleth. This stone was an *eben*, which term is never applied to a *cliff* like Zahweileh, but to a stone that might be rolled over by human strength.
- (2) As both the terms *ain* and *bor* are applied to the same spring in Genesis xxiv, 16, 20, it is quite allowable to identify Ain-Rogel either with Joab's Well or the spring which at times bursts out of the ground a little to the south of it.
- (3) Since Gihon was the Virgin's Fountain, Enrogel must be looked for elsewhere, as (*a*) the two names can hardly be applied to the same place in 1 Kings i; and (*b*) it is incredible, and not consistent with the sacred narrative, that Solomon should be crowned in full view of Adonijah and his supporters, which would be the case if the stone of Zoheleth were identical with the cliff of Zahweileh.

Other interesting points of detail become now more probable if not certain, viz. :—

- (1) The two walls (2 Kings xxv, 4; Isa. xxii, 11) are those reaching one from the upper city and the other from the city of David (on Ophel) to the present upper Pool of Siloam.
- (2) This pool represents "the ditch between the two walls."
- (3) The present lower Pool of Siloam most probably is the King's Pool (Neh. ii, 14) and "the old pool" (Isa. xxii, 11).
- (4) One can hardly avoid identifying "the pool that was made" with (the pool of) the Virgin's Fountain, improbable though it may seem that the wall on the west side of Gihon in the valley (*nachal*) was built so near the eastern base of the Ophel ridge as to come quite close to the pool, as appears to be required by עַר (A.V. *to*) in Nehemiah iii, 16. Or could the chasm (Jer. Rec., 1871, 251) with water at the bottom have been "the pool that was made?" Or was a pool constructed on the south slope of Ophel, and supplied with water from the aqueduct (Jer. Rec., 105) by its being carried across the Tyropœon?

W. F. BIRCH.

THE INSCRIPTIONS AT JERÂSH.

SIR,

In the report of the Princes' visit to the Holy Land, in your last *Statement*, there is a copy of a tolerably long inscription found at Jerâsh, No. 4, which is spoken of as "newly found." If, however, you go back to your

Quarterly Statement for April, 1872, p. 70, you will find it already in print. I may add that I copied it in 1860. You printed a much longer one, which I discovered at the same time, in your *Quarterly Statement* for September, 1870. What I wish now to point out is that apparently the plinth containing the Princes' inscription, No. 4, has been snapped in two, or partly lost, since I visited the spot in 1860. It is in Homeric lines, and reads better if so printed.

.....ΟΜΟΣ ΕΙΜΙ ΑΕΘΛΟΦΟΡΟΥ ΘΕΟΔΩΡΟΥ
 ΜΑΡΤΥΡΟΣ ΑΘΑΝΑΤ (ΟΥ) ΩΚΕΑΝΟΙΟ
 ΣΩΜΑ ΓΑΡ ΕΝ ΓΑΙΗ ΨΥΧΗ Δ ΕΙΣ ΟΥΡΑΝΟΝ ΕΥΡΥΝ
 ΑΓΓΕΛΙ ΤΕΛΕΘΕΙ ΚΑ ΓΗΡΑΟΝ ΕΡΜΑ
 ΑΣΤΕΙ ΚΑΙ ΝΑ ΕΠΗΕΙ ΚΑΙ ΕΣΣΟΜΕΝΟΙΟ
 ΜΑΡΤΥΡΙΟΝ Μ ΔΙΩΤΗΣ ... ΤΙΝΑ ΚΑΝΗΛΘΕΝ
 ΤΑΥΠΕ

I will not guarantee the absolute accuracy of my copy, for when I made it I was young at the work ; but it may help to a more accurate reading of the whole.

The inscription No. 2 I also copied in 1860 ; it is a fragment in Homeric lines, and may be printed thus :—

..... ΠΤΗ
 ΕΝ ΧΘΟΝΙ Κ[ΑΙ] ΠΟΝΤΩ
 ΟΥΣΑ ΧΟΡΕΙΗΣ
 ΕΡΚΟΣ ΟΥ ΘΥ ΘΕΜΕΛΙΩΘΗ

I do not remember the inscription No. 3. Are not any of these inscriptions in de Vogüé's work ? There is great interest attached to them : first, as showing the favour with which the Homeric style and metre were regarded for the purpose of public inscription ; and secondly, as showing the high position of honour which must have been given to Christians in early days. The long inscription which you printed from my copy in September, 1870, illustrates still further the marked triumph of Christianity over false religion.

Wycliffe Lodge, Oxford.

R. B. GIRDLESTONE.

THE BODIES OF THE PATRIARCHS.

I.

Clericus thinks that "the bodies of the patriarchs, with Jacob—if not those of Abraham, Sarah, Isaac, Rebekah, and Leah—were *transferred* from Hebron to Shechem : " and, quietly remarking that "the fact is undoubted," adds, "See Acts vii, 15, 16." By all means.

A. V.	Acts vii.	'81 Version.
15. So Jacob went down into Egypt, and died, he and our fathers. 16. And were carried over into Sychem, and laid in the sepulchre that Abraham bought for a sum of money of the sons of Em-mor, the father of Sychem.	15. κατέβη δε Ἰακώβ εἰς Αἴγυπτον, καὶ ἐτελεύτησεν αὐτὸς καὶ οἱ πατέρες ἡμῶν. 16. καὶ μετετίθησαν εἰς Συχέμ, καὶ ἐτέθησαν ἐν τῷ μνήματι ὃ ὠνήσατο Ἀβραὰμ τιμῆς ἀργυρίου παρὰ τῶν υἱῶν Εμμόρ τοῦ Συχέμ.	15. And Jacob went down into Egypt, and our fathers; and they were <i>carried over unto Shechem, and laid</i> ² in the tomb that Abraham bought for a piece in silver of the sons of Hamor (<i>m. Em-mor</i>) in Sechem.

¹ *Vulg.*: Et translati sunt in Síchem et positi sunt in sepulchro.

² *Alford tr.*: were carried to Sychem and laid.

Clericus, in saying "transferred from Hebron," of course implies that the bodies of the twelve patriarchs were first buried there.

Certainly Macpelah at Hebron was the burial place of SARAH (Gen. xxiii); of ABRAHAM (Gen. xxv, 9); of ISAAC and REBEKAH (Gen. xlix, 31); of JACOB (Gen. l, 13) and his wife LEAH (Gen. xlix, 31). But I am aware of no statement or tradition to the effect that the twelve patriarchs were ever buried there.

Indeed the evidence is all the other way. In the above passage St. Stephen says, not that Jacob was buried in Shechem, but that there "our fathers," *i.e.*, the twelve patriarchs, were buried.

I am not aware of any authority, as regards this particular passage, for rendering μετετίθησαν "*transferred*," as Clericus translates it. There seems good reason for keeping to the A.V. "*carried over*." For, in fact, the body of each of the twelve patriarchs had to be "*carried over*" two geographical divisions. They had to be carried over

(1) The streams and rivers, especially the Jordan; and

(2) The boundary of the lot of each tribe's inheritance.

Yaxley, Suffolk,

W. H. S.

6th October, 1882.

II.

I THINK that your correspondent "Clericus" will find, on further examination, that his "fact" as to the bodies of the eleven patriarchs having been moved from Hebron to Shechem, is by no means so "undoubted" as he supposes.

There is nothing in Holy Scripture to show that the bodies of the eleven sons of Jacob were ever buried at Hebron, and therefore, nothing to show that they were ever carried from Hebron to Shechem. St. Stephen (Acts vii, 16) does not say that they were carried to Shechem from *Hebron*, but from *Egypt*, in which country they died.

It is true that Josephus (Antt. II, viii, 2, and B. J. IV, ix, 7) is positive that the eleven patriarchs were buried in Hebron; but this will not help "Clericus," for Josephus implies that the bodies were still in Hebron when he was writing. He says he had seen their monuments there, elegantly constructed of the best marble, and he says nothing about the tombs being empty. But the learned Lightfoot (Hor. Hebr. on Acts vii, 16), who is followed by Bishop Wordsworth, suggests that this claim of the later Jews to possess the sepulchres of the eleven patriarchs arose only out of their jealousy of the Samaritans, and they would probably have claimed the tomb of Joseph as well but for the express words of Scripture at Joshua xxiv, 32.

St. Stephen's statement, that the eleven patriarchs were carried from Egypt and buried in Shechem, is supported by the authority of St. Jerome, who distinctly says that the twelve patriarchs (including Joseph) are not buried at Hebron, but at Sychem, where his disciple St. Paula saw their sepulchres (Ep. 86, &c., App. Bp. Wordsworth). It is worth while observing that St. Stephen's words need not be pressed so as to make out that Jacob also was buried at Shechem; the fact that he was buried at Hebron was sufficiently notorious to make further reference to it needless.

Your faithfully,

CHARLES DRUITT.

12th August, 1882.

SAUL'S JOURNEY.

(1 Sam. ix.)

BY HERR C. SCHICK.

(*From the Zeitschrift of the German Exploration Society.*)

IN considering the route by which Saul reached the land of Zuph, my chief endeavour will be to point out the most likely positions of Rachel's grave, Saul's Gibeah, and Samuel's habitation, Rama.

Of the various suppositions about Rama we must speak later on—for the present it is more important that we should discuss the position of Gibeah. It is generally thought that the latter should be sought in Tel-el-ful, and that Saul started from thence, with his servant, and passed by Mount Ephraim, and through (Salisa) Shalisha, Shalim and Benjamin into the land of Zuph. The journey to Rama lasted three days, and the whole context seems to suggest slow travelling on foot rather than the speedy

progress which the Rabbi Schwarz attributes when he describes this journey as extending through the whole of Samaria as far as the Jordan. With regard to Mount Ephraim, the *Wâdy Hannina* (commencing to the north of Gibeah, and running in a south-westerly direction to Beit Hanina and 'Ain Karim) forms the natural boundary between the mountains of Judah and Mount Ephraim. The land of Shalisha must be sought for to the east of the present Ram, and is most likely identical with Laish, Isaiah 10, 30, which we find mentioned in connection with Rama and Anathoth. The next place through which Saul passed was the land of Shalim, and this must be sought in the neighbourhood of Mickmas and Tayebe, a district now called Bene Salim¹). Arrived here Saul must have passed into the land of Benjamin, and continued in a westerly direction. Journeying towards Bethel, we may imagine that the first night would be spent near Surda, or somewhere in that neighbourhood. On the second day, travelling southwards, they would about reach Abu Ghosh. And the third day, as they continued in an easterly direction from Gibeah (and when in the neighbourhood of Beit Nakuba) they would see before them on a hill the present Suba. Robinson has already tried to identify this place with the habitation of Samuel, the ancient *Ramathaim Zophim*. This would therefore be the scene of Saul's meeting with the prophet. The springs of Suba lie below in the valley to the west.

As Saul departed on the following day to return to his home, the route (1 Sam. x, 2) which he was directed to take, was by Rachel's sepulchre in the border of Benjamin at Zelzal, the oak of Tabor, Gibeah Elöhim where the garrison of the Philistines was. We receive, throughout, the impression that this was the natural route, and it does not seem possible that a turning away to the Rachel's grave of tradition was intended, for the latter is in the territory of Judah. Now there is actually an ancient tomb north of the hill on which is the village Kastal (and on the top of the ridge of hills) called Kubbet 'Abd el-'Aziz, or sometimes Kubbet *Rahel*. The appearance of the place suggests great age; near some old trees there is a tank cut in the rock, and the remains of houses. If the boundary line was drawn from the spring of Lifta to Abu Ghosh this spot would lie within the border of Benjamin, and near to its limits. The direct way from Suba to Tell-el-ful leads past it, running in a north-easterly direction along the ridge of the mountain as far as Neby Samwil.

North of this tomb, below the gardens of Beit Surik there is a rocky valley, and it is here perhaps that Zelzal should be sought. Ascending again from the valley, we find a little grove which is considered sacred (a wely), and which may be a survival of the tradition of the oak of Tabor, and, possibly, the three men who here crossed Saul's way, were coming from Koloniyeh and Beit Tulma and were passing over the ridge to go by Neby Samwil to Beitin.

¹ Any connection between these two names is, according to philological laws, hardly possible.

With regard to Neby Samwil, many things lead us to suppose that it is the ancient Mizpeh. Before Saul reached this hill he passed a post of the Philistines, and from here his way would lead him to the southern side of the hill, where he came across, and joined the company of the young prophets. As the hill was one of the chief seats of learning, it was called the "hill of God," or "Gibeat Elōhīm," and it is identical with Gibeon, the high place at which Solomon sacrificed (1 Kings 3, 4). The town of Gibeon lay at the northern foot of the hill. The tradition that Samuel was buried there is of comparatively modern date, and perhaps arose from its being the burial place of some Christian or Mohammedan saint of the same name.

From there Saul would have had about an hour's journey—by Bet Hnīna before reaching his home in Gibeah.

THE GEORGIAN INSCRIPTION AT JERUSALEM.

DECIPHERED BY PROFESSOR ZAGARELLI OF ST. PETERSBURG.

(*From the Zeitschrift of the German Exploration Society.*)

IN September, 1879, in the large Greek convent at Jerusalem, Herr Schick discovered a stone in the corner of a wall on which was a large and very well cut inscription.

Upon making inquiries he was told the characters were in "Korgi," and that they were cut by a people whose kings once had considerable influence in Jerusalem, and whose descendants now lived in the far north on the Caucasus ; but no one knew the modern name of this nation. Herr Schick sent me this information, and after a little consideration I concluded that most likely the characters were the ancient Georgian—which used to be called "Khuzuri" (or the priestly), see Fr. Ballhorn "Alphabets," 1880).

Professors Leskien and Euting, of Strasburg, agreed with this view, but neither were able to decipher the characters.

Herr Euting was therefore good enough to forward the copy to Dr. von Dorn in St. Petersburg, by whom it was given to Professor Zagarelli. A long delay occurred owing to Professor Zagarelli's first translation being lost in the post ; but after waiting a long while I wrote about it, and he was good enough to send me a copy of his work.

As I neither know the language, nor am well versed in the history of the Georgians, I cannot decide on the historical value of the inscription, but Professor Zagarelli points out that it is of considerable importance to Georgian history, as it proves the long connection of the Georgians with the Holy Land by the fact that at various times they built and supported cloisters. And also (according to Professor Zagarelli) the inscription has a certain importance paleographically as being a specimen of the ancient Georgian ecclesiastical characters. The inscription will doubtless soon be fully explained, as many efforts are being made in various directions to elucidate it.—H. Guthe. Leipzig, 1881.

1. The following is the inscription (with interpolated additional characters) in ecclesiastical Georgian characters¹ :—

ԲՈՆԵՆԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ
 ԲՈՆԵՆԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ
 ԲՈՆԵՆԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ ԲԵՆԵԴԻԿՏԻՆԻ

3. Translation. Christ.² Holy Nicholas be thou intercessor with Christ for the Queen (=Princess) of Kachetien³. Elizabeth, formerly Helena.⁴

LIST OF RECENT PALESTINE LITERATURE.

By PROFESSOR SOCIN.

(From the *Zeitschrift of the German Palestine Exploration Society.*)

AMONGST works treating of early ethnographical subjects, *Baur* and *Kautsch's* short sketches deserve especial notice.

In *Kugler's* compendium of the History of the Crusades, we have a most valuable book, and one that supplies a long felt want. To students it will prove an excellent guide, as it disentangles the contents of a ponderous mass of publications, and gives a very clear account of our present knowledge of the subject. It can have been no easy task to elucidate the policy of a period so bewildering in its confusion of interests and claims. The jealousies of the European powers, the self-interestedness of the pontiffs, the arrogance of the Byzantine court, and the endless dynastic and family conflicts, all combine to make an accurate history of the time an almost impossible task. Herr Kugler, however, has triumphed over all these difficulties, and given us a book which, both for historical and geographical investigations, can hardly be too highly commended. The accompanying map of Syria in the time of the Crusades is especially valuable.

¹ The capitals are the ecclesiastical characters ; the rest is filled up in civil Georgian.

² All ancient Georgian documents of any importance commence with the letter Ի Ե (=kh), it signifies "the name of God," or God willing.

³ The early kingdom of Kachetien is included in the present province of Tiflis.

⁴ The Helena here mentioned, is doubtless the daughter of the king of Kachetien, David II, 1604, and sister of Teimuraz I, 1605–1665. She first journeyed (about 1615) to Persia, and later (1624) to Jerusalem, where she founded the cloister of St. Nicholas, in which she became a nun under the name of Elizabeth, or according to some inscriptions, Anastasia. See Brosset's "Histoire de Georgie," ii, and Bullet. "Hist. Philolog.," ii and iii.

In our last review we referred to the *Trench collection* of the historical works of the Crusades. It includes Baldricus, Guibert de Nogent, Albert von Aachen, and the new edition of William of Tyre. *Riant* has made a most useful collection of historical letters relating to the Crusades; he publishes some which have not before been printed, and points out the want of authenticity in others. The letter of Urban II, for instance, to Alexius, was written by a physician of Verona, in 1574.

A collection of documents relating to the Abbeylands of "Notre Dame de Josaphat," is important, and we must also notice a history of the bishopric of Bethlehem by *Lagénissière*, and *Pavie's* book on the part taken by Anjou in the Crusades. The controversy between *Sepp* and *Prutz*, which we before referred to, has led to more remarks and explanations from *Gildemeister*, *Sepp*, and *Röhrich*.

Of works on natural history we must mention *Böttger's* "Reptiles and Amphibia of Palestine," and *Klinggrüff's* "Vegetation of Palestine;" the latter is chiefly botanical, but also touches upon the questions of grain cultivation and wood growing.

For meteorological information we have to consult various sources, and we find that the very severe winter of 1879-80 did a great deal of damage. Snow fell even in the valley of the Jordan. The reports from the Temple Observatory, give us the readings of the barometer, the rainfall, &c.

The question of what the future of Palestine is to be, becomes more urgent every year. We have before us many pamphlets on the resources of the land. As an example, we quote a few details from the reports of the German colony in Sarona. "The colony cultivates 800 acres (Ger.) of land of which 200 are vineyards and garden-land. An acre of land yields on an average 6 to 12 ctr. of good wheat, or 10 ctr. of barley. Half of the arable land is thus sown; on the rest they grow sesame, millet, potatoes, melons, &c. Potatoes planted on the 16th March, would be ripe by the 16th May, and an acre yields about 24 ctr.; a roll, six pounds, is sold for three piastres. A family could subsist well on forty acres of land. An acre of good land is worth from 10 to 12 napoleons, poor land from 3 to 6. The crop of cucumbers was so prolific that the price fell to the eighth of a piastre for six pounds. The German colony of Jaffa and a Jewish colony are flourishing equally well, but we have bad reports from the German colony at Haifa, their finances being at a low ebb.¹

The fact that the colonists are more or less dependent on the people of the land, and, even if badly treated, have great difficulty in obtaining justice from the authorities, must always be a stumbling block to the projectors of fresh schemes for colonization. Although (from his experience of thirty years) Herr Schick assures us that European influence has caused considerable progress, we still think that many things would have to be altered before colonists could feel really safe.

¹ I have no book by me with the foreign measures, and only know the German *Malter*, or bushel, as applied to wheat. I conclude the ctr. is about equal to our quarter, of which an English acre yields from five to six.

We have the usual reports from the various missions. Pastor Baarts gives us a description of his efforts in Lebanon, Damascus, and other places. We have also the report of the Zion school. From the Roman Catholic reports, we learn that their mission has forty establishments in the Holy Land, containing no less than 300 Franciscans, and that their schools are attended by 1,440 boys, and 1,122 girls.

Another pamphlet tells us of the 17 mission stations of the Patriarch, and a third paper mentions the principal Maronite priests. The work of the missions is having a very decided effect, not only in the towns, but throughout the whole country. Our readers have doubtless been interested in Klein's papers on the Fellahin; I must also call attention to Herr Goldziher's work on the Mahomedan saints. It is a theme which has a considerable bearing on the question of the Fellahin. One thing should be borne in mind, namely, that we cannot be certain that *all* present conditions were the same in earlier times.

To turn to art history we hear that the colossal statue found near Gaza (and of which various notices have appeared) has with much difficulty been transported to Jaffa, and thence to Constantinople. In reference to the mosaics found near the mount of Olives, I must mention that the name of the place, according to Herr Schick, is in Arabic, Khurbet Kukarki. Saulcy has described some other ancient art remains, and the question of the length of the cubit is again agitated.

Steck has written about the routes of the pilgrims, and Grundt gives some details of the Empress Helena's pilgrimage.

We can only touch here on the importance of the large work of Tobler and Molinier, and also that of Röhricht and Meissner calling attention to the first 42 pages of the latter (*Deutsche Pilgerreisen*), which contain a very good description of the pilgrimages after the time of the Crusades. A new edition of the "*Saint Voyage de Jerusalem*" contains an account of the pilgrim Ogur VIII of Anglure. Dr. Gildemeister has given us the most important journeyings of Kait Bey. Martinvo's publication, contains a phototype of the "*Tractatulus totius sacræ historiæ elucidatorius, &c.*," which Tobler considers to date from the year 1480 (not the phototype).

The English survey map is by far the most important publication of the year.

Here we may mention *en passant*, about a dozen books of travels in various languages, but of no great importance.

To turn to more scientific works, we have Herr Schultz's article on Jerusalem, for the second addition of Herzog's *Encyclopædia*. In so much that is good we are sorry to find that Herr Schultz tries to place Zion again on the south-west hill. M. Walther has written an "*Etude historique*" on the topography of ancient Jerusalem, on which subject we have also the valuable articles of Alten and Klaiber. With regard to the temple we are greatly pleased with Smend's treatise, and his commentary on Ezekiel. He suggests that the descriptions of the re-constructed temple, were written from plans which the prophet had before him. Grätz and Loeb have also papers on the second temple.

On the geography of Southern Palestine, many papers have appeared in the "Zeitschrift," amongst which we would call attention to Herr Schick's paper on the Frank mountain. Grätz tries to prove to us that the Nazareth of the New Testament was, according to the Talmud, on the site of the Galilean Bethlehem in the land of Zabulon; and that Migdal Nunyah of the Talmud corresponds to Magdala. Schultz's articles on Capernaum and Jericho are worthy of notice, as are also those on Hermon and Rama by Rüttschi and Mühlaus, all in Herzog's Encyclopædia. A description of the Carmelites reaches us from the Holy Land, written by one of the order.

After the English memoirs, the third part of Guérin's works on Palestine contains quite the best description of Western Palestine extant. Speaking of the other side of Jordan, we have an essay of Klödeus, and an interesting notice by Egli, this latter gives the measurement of the Dead Sea, and the Sea of Tiberias. Lortet has added some valuable information to our knowledge of the Galilean Sea; it was certainly once connected with the Mediterranean, hence its saltness. Its fish and mollusca are very remarkable, and amongst them Lortet has discovered a new species. In Guérin's topography of ancient Tyre, there is particular mention of a causeway, which should run from the south-west point of the island, to Ras el-abyad. A French officer has given an account of the siege of Tyre in the "Revue des deux Mondes," and Lortet has discovered a station of the age of stone near Tyre. Zschokke has an article on the Maronites, and Merredaglia a pamphlet on Cœle Syria.

Lortet's accounts of his travels, though only extending to Beirut, are charming, and his descriptions of places, and of the various types of people, most accurate and clever.

According to C. von Scherzer's review, it is to be regretted that the Grand Duke Ludwig Salvator's work cannot be obtained by the general public. The theory of the Exodus has been again discussed. Doughty examined the ancient remains of Madain Saleh (Hidyar, near Medina), which resemble those of Petra, and then proceeded to Nej, and Dr. Soetbeer has been seeking the gold mines of Ophir.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

It was stated in the April *Quarterly Statement* that the whole question of excavation and exploration in the Turkish Empire was under consideration at the Porte. Nothing definite has yet been published. As it seems useless to wait for the new regulations, which may be delayed a long time, the Committee have decided upon immediately undertaking another part of their original programme.

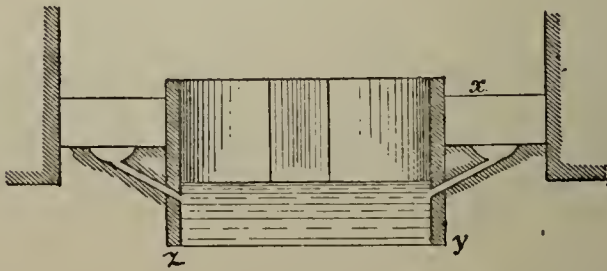
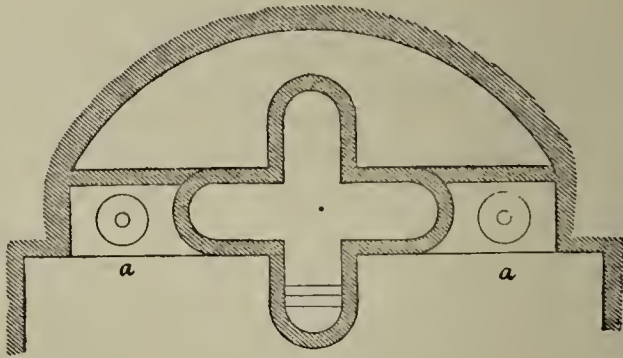
An expedition will therefore be attempted for the autumn of this year, in order to effect the Geological Survey of Western Palestine. In October we hope to announce the formation of the party and the programme in full of the proposed work, its objects, the problems which it is sought to solve, and the Biblical aspect of the undertaking, with an estimate of the probable work of the journey.

Captain Conder has now returned to the service of the Committee, and is at work upon his *Memoirs of the Eastern Expedition*. He has also completed his book called "Heth and Moab," which contains a popular account of that expedition. This will be published in October, uniform with "Tent Work in Palestine," but in one volume instead of two.

Captain Conder writes (22nd June): "In the account of the siege of Philadelphia, or Rabbath Ammon, by Antiochus the Great, in 218 B.C., as noticed by Polybius (v, 17), it is mentioned that a communication with the water supply outside the citadel had been made by a long subterranean passage, and that the citadel was only reduced when this was discovered to Antiochus by a prisoner. It seems to me that this is explained by a discovery which, as far as I have been able to find, was a new one, and due to the recent Survey. In examining the tombs and caves on the north side of the town I lit upon the entrance to a very large rock-cut reservoir, some 30 feet deep. The cave door was almost on the level of the roof, and a steep slope, with a few rude rock-cut steps, led down. I made a plan and sketch, which will appear in the "Memoirs." Just inside the entrance,

which is about 50 paces (125 ft.) north of the middle tower of the north wall of the eitadel, I found a little rock-cut passage, which ran at first east and gradually curved round and trended south. I followed it for 40 feet, and then found it very narrow and choked up. It seemed to me to be intended to enable persons inside the eitadel to reach this great reservoir, which must have held rain-water, as it was too high up to be fed from the stream. It is perhaps to this passage and reservoir that the historian alludes."

The accompanying plan and section represent a font and portions of a baptistry recently found at Latrûn, close to Amwâs, 15 miles west by north of Jerusalem. The cruciform shape of the font is rare, but not unknown. Somewhat similar examples will be found in the "Dictionary of Christian Antiquities." The section has been copied from the drawing sent home, the dimensions being approximate. A perspective drawing showing the font and accessories more clearly has been asked for, and will, we hope, be given in October.



$$\begin{aligned} x y &= 5 \text{ ft} \\ y z &= 10 \text{ ft} \end{aligned}$$

An account of the various hospices, &c., at Jerusalem, published on p. 160, is taken from Lunez's "Year Book of Jerusalem." It does not include, however, any account of the new Ophthalmic Dispensary recently established by the English Langue of the Order of St. John of Jerusalem. All travellers in Jerusalem will rejoice that such an institution has at last been founded. Under proper management it cannot fail of becoming a great blessing to the country. The Sultan contributed 1,000*l.* towards the hospice. There is a local committee at Jerusalem, consisting of the English Consul, Dr. Chaplin, and Mr. John M. Cook. The surgeon is Mr. J. C. Waddell, M.D. There is already a daily average attendance of from 20 to 150 patients. The committee ask for further

support from those interested in the Holy City. The offices of the Order are at St. John's Gate, Clerkenwell, E.C.

At the last meeting of the Annual Committee Lieut.-Col. Sir Charles Wilson was re-elected, on his return from Egypt, a member of the Executive Committee.

The authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem.

- (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

The income of the Society, from March 22rd to June 25th inclusive, amounted in all, including subscriptions, lectures, and payment for maps, measures, and publications to £685 9s. 11d. The expenditure during the same period was as follows :—

				£	s.	d.
Exploration and Survey	..	..	..	115	0	0
Printing	..	..	..	200	0	0
Maps and Memoirs	..	..	..	337	0	0
Management	..	..	..	178	0	0

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter..

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

found necessary for him to take sick leave for a few months. On the expiration of his leave he has rejoined the Society, and is now actively engaged in completing his 'Memoirs.' The portion of the map executed by him has been laid down upon sheets of the same shape as that of the large map of Western Palestine, and also engraved on the reduced scale. Captain Conder has completed a popular work on his last expedition, called 'Heth and Moab,' which is now being printed. It is hoped that the 'Memoirs' will be finished, and the book ready, in the autumn. The form of publication of the former has yet to be decided.

II.

"The issue of the 'Survey of Western Palestine' has also been retarded by the recent events in Egypt. The departure of Professor Palmer at the end of June, followed by his unfortunate murder in August, kept back the last volume of 'Memoirs,' which we, however, published in April last; and the summoning of Colonel Warren to go out in search of the murderers has delayed the Jerusalem volume, which is now again taken in hand. This volume, with its portfolio of plates and plans, and that of Canon Tristram on the 'Flora and Fauna,' will complete the work, which has been in course of publication such a length of time.

III.

"The maps to illustrate the Old and New Testaments, consisting of names and tribe boundaries, &c., laid down upon our Survey maps by Mr. Trelawney Saunders, are now published, in addition to the reduced modern map, and the same with the water-basins laid upon it. It is under consideration by the Committee whether the part of Eastern Palestine already surveyed shall not be added to their small maps.

IV.

"The survey of Eastern Palestine has been necessarily deferred until the Firman has been signed. The Committee see little reason to expect that they will obtain this permission at present. They propose, therefore, to undertake, without further delay, the geological survey which forms a part of the original prospectus of the Society. Practical suggestions have been made by Sir Charles Wilson, and negotiations have been opened with a geologist of great eminence. If the expedition can be arranged it is proposed to send it out in the month of November, and to secure, if possible, four or five months of steady work.

V.

“The following is the Balance Sheet of Receipts and Expenditure for the year 1882:—

RECEIPTS.

1882.	£	s.	d.
Jan. 1.—Balance brought forward	112	11	7
Dec. 31.—Subscriptions and Lectures.. ..	1,993	4	2
„ Maps and Memoirs	1,577	11	11
„ Books.. ..	97	13	6
„ Photographs	14	16	11
	<hr/>		
	£3,795	18	1
	<hr/>		

EXPENDITURE.

	£	s.	d.
Dec. 31.—Exploration	889	4	9
„ Maps and Memoirs	1,372	16	11
„ Salaries and Wages, Rent, Advertising, Stationery, Bookbinding, Office and Sundries, Books and Translations	644	2	3
„ Lecture expenses	45	17	3
„ Postage.. ..	88	10	11
„ Printing	391	12	0
„ Balance	363	14	0
	<hr/>		
	£3,795	18	1
	<hr/>		

Examined and found correct.

W. MORRISON,
Treasurer.

“It will be seen, therefore, that the Committee spent during the year the sum of 3,432*l.*, of which management took 21 per cent.; the maps and ‘Memoirs’ 40 per cent.; on exploration (there being no party in the field) 27 per cent.; and on printing and posting of the *Quarterly Statement* about 12 per cent.

VI.

“The Committee have published during the year, besides the third volume of ‘Memoirs,’ a Report of the Princes’ Visit to the Holy Land (Prince Albert Victor and Prince George of Wales), and the Survey and Plan of the Mosque of Hebron, executed by Sir Charles Wilson and Captain Conder, assisted by the Princes. This Report (drawn up by Captain Conder) was presented to the Committee for publication by His Royal Highness the Prince of Wales. A paper has been published on the Climate of Jerusalem, by Dr. Chaplin, embodying the result of twenty-two years’ observation, viz., from 1860 to 1881, both inclusive. Papers in the

Quarterly Statement have also appeared on the Route of the Exodus, on the Fellahin of Palestine, and on many topographical and archæological points of interest. To the writers of these papers, especially to Dr. Chaplin, Canon Scarth, the Rev. W. F. Birch, and Captain Conder, the Committee beg to offer their best thanks.

VII.

“The Committee have had to deplore the loss by death during the past year of three most valuable members of their body. The first of these is Professor Pusey, who never ceased to take the deepest interest in the work, and to support it by donations, as well as by his personal influence. The next is Lord Talbot de Malahide, an active member of the General Committee. The third is Professor Palmer, whose loss to this Society, as well as to Oriental scholarship, is irreparable.

VIII.

“The Committee have, lastly, to convey their best thanks to their Local Honorary Secretaries, to all their subscribers and donors, and especially the Bishop of Nelson, the Rev. W. MacGregor, Rev. C. Watson, Rev. H. Hall-Houghton, Rev. F. C. Wigram, Rev. M. T. Farrar, Colonel Locock, Rev. A. M. Morrison, Rev. J. Bellamy, the Rev. G. Maxwell, Mrs. Guise, Mr. Ellis, Mr. Burns, ‘Omega,’ Mrs. Greenwood, Mr. G. S. Gibson, Mr. C. F. Fellows, Lady Smith, Mr. S. H. Officer, Mr. A. W. Jones, Mr. Beamont, Mr. A. H. Heywood, Mr. Dunkley Paine, Mr. Kent, Miss Wakeham, Miss Bridges, Mr. H. N. Middleton, who have sent donations of 5*l.* and over.

IX.

“One of the members of the Executive Committee, Major Grover, has resigned, he having been sent to Portsmouth. His place has been taken by Colonel Locock, R.E. Lord Sidmouth has also joined the General Committee.”

The Report having been read and discussed, it was proposed by Lord SIDMOUTH, and seconded by Mr. HENRY MAUDSLAY, that it be received and adopted.

This was carried unanimously.

It was then proposed by Dr. WRIGHT, and seconded by Dr. Löwy, and carried unanimously, that the following gentlemen be invited to join the General Committee:—

Rev. J. N. Dalton.

Mr. Donald MacDonald.

Sir Edmund Lechmere, Bart.

Rev. Canon Scarth.

Professor Robertson Smith.

Lieut.-Colonel Stodart, R.E., Director of the Ordnance Survey.

It was then proposed by the CHAIRMAN, and seconded by Dr. GINSBURG, that Lieut.-Colonel SIR CHARLES WILSON, K.C.M.G., R.E., D.C.L., F.R.S., should be invited to rejoin the Executive Committee.

A vote of thanks to the CHAIRMAN completed the business of the Committee.

CURIOUS NAMES IN GALILEE.

THE study given to the nomenclature of the Survey has probably by this time almost exhausted the identifications which can be made from it, though from time to time a new and unexpected light may be thrown on Biblical topography by the map. Thus, for instance, the unknown Meroz (Judges v, 23) might perhaps be recognised in the 'Ayûn er Roz close to Kedesh of Issachar, south of Lejjûn (Sheet VIII, Mk), or at 'Ain er Roz (Mj), north of Lejjûn. And, again, Bethshemesh of Naphtali (Josh. xix, 38) is possibly the ruin Shemsîn, east of Tabor (Sheet VI, Qr); while Sheikh Kâsim (Sheet IX, Qj) is a not impossible site for Shahazimah (Josh. xix, 22).

It is, however, in the present paper proposed to glance at various names which, though not directly connected with Biblical topography, are yet perhaps indicative of the ancient condition of the country, and especially at those in the northern sheets of the map, of which five (Sheets I-IV and VI) were surveyed under Lieutenant Kitchener's direction, and the nomenclature translated by the late Professor Palmer, some of whose valuable notes are very suggestive to a student of Arab nomenclature.

Take, for instance (Sheet I, Ne), 'Ain Ib'al, "the Spring of Baal," a village in the Tyrian hills, evidently an old Baalath. Or Sheikh Kâsim, north of Tyre, who, as Professor Palmer himself pointed out, is the Semitic god of "fate," the Phœnician Reseph, whose name M. Clermont Ganneau recognises in Arsûf (Apollonia), near Jaffa. Again, near Tyre (Sheet I, Me), Professor Palmer sees in Malkîyeh (a modern village) the name of Melcarth, the Hercules of Tyre, who is also recognisable as Neby Ma'shûk, "the prophet loved by women." And, had he been spared, the great Arab scholar would no doubt have added many other such interesting notes; for in Galilee especially Pagan and Phœnician influence is so marked that more of the Canaanite nomenclature may be expected to survive than further south.

On Sheet II (Pb) there is a very interesting spring named 'Ain Abu Sudûn. It is below a certain ruin called Juneijil, which is probably an old Gilgal. The name Poseidon has been thought by some scholars to be of Phœnician origin, and to signify "the great father of fishing" (or of Sidon), and if this be a really reliable derivation it is instructive to find close to Phœnician territory a Gilgal or "circle" where the name still seems to linger.

'Almân, close by this last, is an ancient Oulam of the Talmudic boundary

of Phœnicia (see "Handbook to the Bible," p. 304). There is another place of the name in Lower Galilee (Sheet IX, at top), and it is possible that both derive their name from the Phœnician deity called Oulam, or "eternal," and also Baal Haldim, or "the everlasting lord." It should also be noticed that Khuldeh is a name applying to several places in Galilee, in Philistia, and elsewhere. It is identical with the Phœnician Haldim, and has the same meaning of "enduring." This name seems a curious one to apply topographically, but like Baal, or Kadesh, or any other title derived from local worship, it is most easily explained (as is also Oulam, "the eternal") as being a survival of the name of the local deity.

The *Ard Dufneh* (Sheet II, Rc), near Banias, represents the ancient Daphne. It is the "land of Dawn," connected with all the sacred sun temples which surrounded Hermon, "the great sanctuary," and the groves of Banias or Pan, whom modern mythologists seem to regard as representing the refreshing breeze which blows from the snowy mountain above Banias.

Hâris is another important name in this connection, and occurs in Galilee and also in Samaria. The Cheres, or orb of the rising sun, is often mentioned in the Bible, and the Galilean town (Sheet II, Oc) stands on the highest part of the watershed, whence a fine eastern view is obtainable. In Samaria, Kefr Hâris represents the mediæval Caphar Cheres, the Mount Heres of the Bible, where Joshua was buried, and which the Jewish commentators render "village of the rising sun," and state to be so named because Joshua, who was here buried, had commanded the sun to stand still. Hâris is also a name of a mythical Arab sun hero.

El Khâlisah, "the pure," is another town name (Sheet II, Qc) connected with Paganism; for the ancient Arabs in Yemen had a famous temple of El Khâlisah at Tebala, which was called the Kaaba of Mecca (Pococke, "Hist. Arab," p. 106); and at Mecca, between the hills of Safa and Merwah, stood the stone sacred to El Khâlisah. In the fourth century the goddess Venus was worshipped at Elusa (El Khâlisah), in the Beersheba desert, and the "pure one" appears, therefore, to be a goddess (see Jerome's "Life of Hilarion").

The name *'Azziyeh*, applying to a ruin on this sheet (II, Qb) is also probably pagan. There are several other instances in the nomenclature, such as Khûrbet 'Azîz (Sheet XXI) and 'Ozziyeh (Sheet I). The radical meaning is "strong," "powerful," or "honoured," and it occurs in Hebrew in the well-known instance of the city of Azzah or Gaza. The demon Azazel derives his name from this root, and the modern Abd el Aziz is connected. The pagan Arabs adored a female divinity named 'Azzi, under the symbol of a thorn tree, and it is possibly from such a divinity that Gaza (the City of the Eight Gods) and other places of this name were called. El 'Azzi is mentioned in the Koran (Sura liii) as one of the goddesses of Mecca.

Neby es Saddîk (Sheet II, Oc) introduces us to another class of names common in Palestine. The word means "just," or "truthful," but it is specially used by the Jews to mean a Saint, or holy man. Thus one of the

best known Jewish tracts is called "the Graves of the Saddikim," and details a pilgrimage in Palestine by a pious Jew intent on visiting the graves of all the patriarchs and famous Rabbis, of whom so many lie buried round Tiberias and Safed. All the prophets called Saddik may be thought to have been Jewish Saints of the second to the seventh centuries, and these names are survivals of a very flourishing period, when the Sanhedrin had its headquarters in Galilee, and when the Mishna was being put in writing by the great Rab.

Ku'at el Tûfanîyeh (Sheet III, Nf) suggests a tradition which should be collected. It means "Castle of the Flood," and is the particular word used in Arabic especially to denote the universal deluge. *Bir Yush'a* (Sheet IV, Qd) and *Neby Yush'a*, due east of the ruins of Kadesh Naphtali, suggest some reminiscence of Joshua's contest against the King of Hazor in Upper Galilee, but no such legend has as yet been collected. The Hummâm Benât Ya'kûb (IV, Re) seems to be connected with a tradition which consecrates the upper part of the Jordan to the "daughters of Jacob," and which is at least as old as the twelfth century.

It is also remarkable that there is another Mount Hermon on this sheet north of Kefr Bir'im, a very lofty hill with a spring of the same name ('Ain Haramûn) on the north-east (Sheet IV, Oe), and further south (east of Neby Sebelân) is Jebel ed Dô, "the mountain of light." These names, together with Mâlkîyeh, near Kadesh (where is a Roman sun temple), all show how widely spread the Phœnician sun worship must have been in Galilee.

Khûrbet Fasîl Dâniâl, "the ruin of the Judgment of Daniel" (IV, Ne), gives indications of another tradition not yet collected. *Khûrbet Nuseibeh* (IV, Pe), like the Nusb 'Aweishîreh near Jericho (Sheet XVIII), and the Beit Nusîb of Judah (Sheet XXI), give evidence of the adoration of the "menhir" at the spot, concerning which much has lately been written. Professor Palmer himself understands the word in this sense, and it is found east of Jordan still applied to existing menhirs.

Majnâneh (Qd) and *'Ain el Jinn* (Pf), on the same sheet (IV), show the existing belief of the peasantry in enchantment. *Mughâret Sebelân*, "the Cave of Zebulon," indicates a legend connected with Neby Sebelân still to be collected; and the *Sheikh en Nettâh*, or "butter," shows the survival of a belief in some divinity with horns (Qc), who may be compared with the horned Neby Iskander (Sheet VIII), who is the legendary Alexander with ram's horns.¹ *Tell Abâlis* (probably corrupt for Iblis) indicates a legend which might be worth collecting (Sheet IV, Re). It is a large mound close to the Hûleh, and evidently supposed to be haunted by Iblis. *Wâdy Jehennum*, or "the Valley of Gehenna," is a curious name for the open valley west of Kadesh Naphtali. It may be connected with the sun temple here existing, and with the sunset or descent of the luminary on the west into the under world.

¹ This legendary "Alexander of the two horns" is mentioned in the Koran (Sura xviii), and in Persian literature.

Khūrbet Mithilia (Sheet V, Zi) means, according to Professor Palmer, "the ruin of the image," from the Phœnician word, and thus perhaps indicates a pagan shrine. The modern names of the two rivers Belus and Kishon on this sheet are also interesting. The Kishon is called in the Bible the "ancient river," which should rather (according to Gesenius) be rendered "the river of battles," from the root *Kadam* "before," "fronting," "east;" the modern name is *Nahr el Mukutt'a*, which Professor Palmer renders "river of the cut up one." According to the dictionaries *Makt'a* means the "ford of a river," which is Dr. Thomson's translation of the Kishon name; but the double T makes the word quite different, and Professor Palmer's translation is no doubt authoritative. The name may have one of two derivations, either from a tradition (whether monkish or indigenous) of the slaughter of the priests of Baal at this stream by Elijah, or perhaps more probably from a legend of the slaughter of Adonis or Osiris, celebrated in Phœnicia at sacred rivers. The Belus, or river of Bel, is now called the *Nahr Nam'ein*, "the river of blood," and *Nam'ein* is the name of the Anemone, which was sacred to Adonis. It must not be forgotten that Neby Naaman is the name of a divinity in Philistia ("Memoirs," vol. iii, p. 316), and that the blood of Adonis in the *Nahr Ibrahim*, north of Beyrout, was believed by the Phœnicians to fertilise the lands of Byblos annually. It is possible that similar legends once clung to the Kishon and Belus, and are recognisable yet in their modern names. The purple of the *Murex* was also connected with the myth of Adonis, and the chief affluent of the *Nahr Nam'ein* is the valley called *Halzûn*—that is, the *Chilzon* or *Murex*.

'Ain Eyûb, at El Tâbghah, on the shores of the Sea of Galilee (Sheet VI, Qq), is an interesting name. I visited this "Spring of Job" in 1882, and found that it was certainly a sacred place, small offerings being here placed by the peasantry for the local divinity. The mill-owners on the spot were, however, unable or unwilling to give any legend of the spring.¹ *Hajr en Nemleh*, "the Ant's Stone," near Magdala, has also probably some legend attached, and these two might perhaps be collected by one of the numerous visitors who travel to this lake every year. *Hajr ed Dumm* and *Hajr el Muneik'a* (Sheet IV), the "Stone of Blood," and the "Stone of the Cup Hollow" are two dolmens of which I have elsewhere spoken more fully.

Another interesting circumstance on Sheet VI is the recurrence in several places of the name *Cæsarea*. *Kaisariyeh* (Pg) and *Keishârân* (Oh) are ruins on this sheet, and Wâdy Keisâriyeh is near the former. The reason is evident. They are survivals of the old Roman district name; for in the fourth century the episcopal town of Sepphoris was called *Dio Cæsarea*, and these ruins lie in the district of the same name.

Ku'at el Ghûl, "the Ghoul's Castle" (cf. Sheet XVII), shows the localising of a common superstition; but the *Kûsr Bint el Melek*, or "House of the

¹ This name is probably connected with the story in the Koran of a spring which rose by divine command when Job struck his foot on the ground (Sura xxviii, 40, 41).

King's Daughter" (Sheet VI, Qh), on the cliff south-west of Tiberias, indicates a tradition not yet collected, and which it might be of interest to some future tourist to endeavour to record. *Merjes Sunbul*, "the meadow of the ears of corn," probably indicates a Christian tradition, localising the Gospel episode of plucking corn on the Sabbath (Matt. xii, 1-8).

Mughâir el Kurûd (Qg) gives evidence of a local belief in the Kurûd, or monkey-like goblins, who are the terror of the belated Syrian peasant.

Sitti Sekinah (Qh), close to Tiberias, is a very interesting name, for it is the modern form of the Hebrew Shechinah. Like most of the sites round Tiberias it is no doubt of Jewish origin. And it is remarkable that on the plateau west of the lake is a place called *Mes-hah*, or "anointed;" for it is well-known that the Jews of Galilee believed that the Messiah would rise from the Sea of Galilee, an idea probably derived (as are so many in the Talmud) from the Persian eschatology, which represents the future prophet as rising from the eastern lake, or from the ocean.

It is curious also that Neby Shu'aib, or Jethro, should have a shrine at Hattin, and that the basalt cliffs to the south should be called Medînet el Aikeh, "the City of the Grove," which, as Professor Palmer points out, was the name of the city to which Jethro was sent, according to the Koran, to preach to its inhabitants. The localisation of Jethro no doubt led to the localisation of the City of the Grove, and we may perhaps find the origin of the idea in the Book of Judges; for Heber the Kenite was a descendant of Hobab, the father-in-law of Moses (Judges iv, 11), who is thus identified with Jethro (Num. x, 29). I have endeavoured to show, in "Tent Work in Palestine," that it was exactly in this plain of Hattin, east of Tabor, that Heber and Jael pitched their tent, and the tradition of Jethro perhaps grew out of the old episode of the defeat of Sisera. In the Koran (Sura xxvi) the "City of the Grove" is said to have been in Midian; but the accompanying legend of Saleh, whose camel was loughed by the men of Thamud (Sura vii, 71), is also localised—not, as it should be, in Arabia, but in the Valley of Elah (see Sheet XXI), at the *Medhbah Nâket Saleh*. Neby Hud also (Sura vii, 63) is localised at El Yehûdiyeh, near Jaffa (Sheet XIII), and not among the Aclites, where he is said to have preached.

Birket Belâkîs (Sheet VII, Ib) is worthy of notice as preserving the traditional Arab name of Queen Zenobia, which also survives near Heshbon in "Zenobia's Garden." *Ezbâba* (Sheet VIII, Mk) is interesting as giving us the name of Baal Zebub in the plain of Esdraelon; and *Sheikh Meiser* (Sheet VIII, Kl) is also interesting as rendered by Professor Palmer, who connects it with a "certain gambling game with arrows." The same name applies to the shrine at Bethshemesh (Sheet XVII), and Meiser is there locally said to have been related to Samson. He is evidently the Arab god of fate, "the arrow holder," Hobal of Mecca—the same as the Phœnician Resheph; and the divining by arrows over which he presided, is mentioned in Ezekiel in connection with the King of Assyria (Ezek. xxi, 21). It was also a Jewish custom (Midrash Ekha Rabbah, 54, Midrash Koheleth, 116), and has been thought to be referred to in the history of David (1 Sam. xx,

19-40), and of Elisha (2 Kings xiii, 14-19); but in the Koran this custom is denounced.

The Galilean names thus briefly noticed give, when taken together, a very fair idea of the growth of nomenclature in Palestine. We have in all five classes represented. First, Biblical names. Secondly, Pagan titles, which recall the nomenclature of Phœnician sun worship. Thirdly, Jewish names of the later period, when Galilee was the centre of the Rabbinical teaching, and when the bounds of the Holy Land were defined with all the precision of the earlier Talmudic writings; when famous Saddikim were buried in all the principal villages, like Simeon bar Jochai at Meirûn. Fourthly, we have the Christian traditions of the fourth and twelfth centuries, localising round the Sea of Galilee the Gospel episodes, pointing out the "Table of Christ," "The meadow of the ears of corn," "The Mountain of the Sermon," the scene of the "Feeding of Five Thousand," and many other sites, in places often not in accordance with the Gospel narrative. Finally, we have the superstitions of the Fellahin in Moslem garb, the Jinns, the Goblins, the Iblis and Ghouls, which are figures traceable in the Accadian legends as far back as history itself.

Several valuable explanations are derivable from the above examination, showing how the Gazas, the Khuldehs, the Aulems, and such other names as have no proper topographical derivation, originated in the names of the local pagan deities. For Galilee was, until long after the Christian era, a land of Goin or pagans, who built sun temples at Kadesh and round Hermon, and preserved the rites of Adonis and Ashtoreth even down to the fifth century of our era. The nomenclature of the southern sheets of the map does not give us as much that is of this peculiar interest as do the Galilean sheets, and the principal names in Samaria and Judea have already been discussed in such papers as those on the Moslem Mukams, on Early Traditions, and on the nomenclature, which will be found in the volume of special papers of the "Memoir" series.

C. R. C.

MASONS' MARKS.

THESE marks, noted on buildings during the course of the Survey, have been carefully recorded in the "Memoirs;" and some remarks as to their dates have already been published in the paper on Architecture (vol. iii, p. 447). They include all the letters of the alphabet save G, Q, and X, and have no reference to position in the building, nor are they distinctive of a particular district, nor are they confined to the lifetime of an individual. It is, however, now proposed to study this question rather more fully in detail.

There are a few remains of masons' marks which are earlier than the twelfth century. Such are the letters on pillar shafts at Ascalon (vol. iii,

p. 240), which resemble Aramaic letters, and are not unlike marks on the flooring of the Sta Sophia at Constantinople. Such also are the Greek letters on the drafted stones at Baalbek, and those on pillar-bases at 'Am-mân, both probably belonging to the second century, A.D.; but these are quite different from the great majority of masons' marks in Palestine, which belong to the twelfth century, and which closely resemble the marks in English cathedrals of the same period.

Sir Charles Warren has published some of the marks found on the castle at the port of Sidon (*Quarterly Statement*, 1870, p. 326), which are clearly Crusading; but others from Lebanon and Coele-Syria (p. 328) seem to be earlier, perhaps Roman.

A very fine collection was obtained by Lientenant Mantell and myself in Kal'at el Hosn, above Tripoli, in 1881, many of the marks being on drafted stones. The earliest mediæval building on which they would occur cannot date before 1100 A.D., the latest not after 1187 in Palestine, with exception of fortresses in the maritime plain, which, together with those in Northern Syria, were held till 1290 A.D. by the Christians.

The letters of the alphabet are not of any special interest. They may, perhaps, be the initials of the masons, and their shape is generally somewhat Gothic. There are, however, certain signs used quite as often as letters, which are interesting as being of great antiquity and widespread use.

Thus, for instance the Solomon's seal, or five-pointed star, is among the most common of the marks. It has been found on the vaulting of the so-called Stables of Solomon, at St. Jeremiah's of Abu Ghôsh, in the Muristan, in the Hosn Castle above Tripoli, and elsewhere. In the middle ages this was a well-known magic figure, and it may be regarded as a "luck-mark," like others which follow.

The six-pointed star is known, I believe, as "David's Shield," and is formed by two triangles. This is a caste mark in India of worshippers of Parvati, and is occasionally found as a mason's mark.

The Lituus is a very common mark among masons, and with regard to this it may be noted that it is found in the Sceptre of Osiris and of Siva, as well as among Druids and in Persia. It occurs at Jerusalem in the Church of the Virgin's Tomb, in the Muristan, at Neby Samwil, and in many other Crusading buildings.

The Trident is also common in the Muristan, at Samaria, and elsewhere, and it is identical with the caste mark of Vishnu, who answers in India to the Greek Poseidon with his trident. Whatever its original meaning it is a very old sacred emblem, and the fleur-de-lis, which is sometimes used as a mason's mark (though rarely), is said to have a common origin, and is traced back to the Assyrians as a religious emblem.

The hour-glass, or double triangle, is also found in a great many buildings in all parts of Syria (all of Crusading date), and is occasionally turned sideways, and converted into a Tau, or mason's hammer; for it should be observed that the position of the mark on the stone is not uniform in the case of any sign.

The arrow occurs in many varieties, of which the one with a triangular head is perhaps commonest. It is, perhaps, connected with our English broad arrow, and thus with the trident already noticed. The arrow or spear-head is also an Indian caste mark.

The Trefoil is also not unusual in various forms, and is said to be one of the letters of the Slav alphabet about the ninth century.

The square in several varieties is also suggestive of masonic meaning, as is the right-angled triangle, and the equilateral triangle, which is Siva's mark in India.

The Greek *Phi*, the fish, the bow and arrow, the circle (with or without a central dot), the palm-leaf, the cross (both Greek and Latin and Maltese) the mason's square, and the star, are marks which do not require any diagram, but all are frequently used.



The eight marks figured are not easy to describe. The first to the left is very common, and perhaps represents the crozier, or shepherd's crook, under a different form; the second is nearly akin to the sign of the planet Venus; the third and sixth are forms of the trident; the seventh is the sign of Aries.

When we begin to inquire as to the meaning of these signs, and the reasons of their use by mediæval masons, we must remember how much Europe owed to Asia, at this time, of its science and mysticism. Magic was derived originally from the Magi, and the influence of the Jews and Arabs on the races of Southern Europe in the ninth and tenth centuries was specially marked. It is therefore very interesting to remark that masons' marks have been found on Sassanian buildings in Persia, many of the most complex of the mediæval signs being exactly the same as those on the walls of the palæe of Saaditalat near Ispahan, as copied by Ouseley. The hour glass, the various forms of the trident, the bow and arrow, the cross even (a simple pair of lines of equal length), the arrow-head, and other marks are to be found among the Persian emblems. In this case we have, perhaps, a historical link between Europe and the far East. The masons' marks are generally too artificial for it to be naturally likely that they would be separately invented by different races; and all the tendency of modern science has been towards the establishment of a direct historical connection between the early religious emblems and ideas of Asia, and the later mysticism of Europe.

We may, perhaps, safely infer that to the mediæval masons the marks they employed had descended as traditions, and that in some cases at least they were regarded as propitious emblems, or "luck-marks," although their original meaning had, perhaps, long been forgotten. A tradition of the meaning of many of these symbols, such as the bow, the trident, the arrow, the *phi*, the lituus, still lingers in India; and may, perhaps, be known to

initiated masons in England, although to an outsider such titles as Solomon's Seal, the Mason's Hammer, &c., seem rather to indicate the loss of the true meaning.

It should be noted that masons' marks do not appear to have been used by the Jews, or in Byzantine times, or by the Arabs of the fourteenth and fifteenth centuries. They thus serve in Syria to distinguish the work of the Crusaders, and the traveller who wishes to distinguish the somewhat similar structures of the later Christians and early Arab conquerors, in the thirteenth and fourteenth centuries, will obtain in the discovery of masons' marks one of the most certain distinctions he can generally hope to find.

C. R. C.

HAMATH INSCRIPTIONS.

As everything touching on the decipherment of the new hieroglyphics must be of interest, I may perhaps venture to call attention to a comparison which struck me forcibly when, after seeing the Hamath stones in the museum at Constantinople, I had, in the same year, an opportunity of inspecting the very ancient wooden hieroglyphics from the tomb of Hossi preserved in the Boulak Museum at Cairo. These Egyptian hieroglyphics are in relief like the so-called Hittite texts, and some of the symbols at least appear to be identical.

The bull's head is a symbol on Hosi's tomb (as a hieroglyphic), and on the Hamath stone No. 3, or the Jerabís text No. 3.

The antelope's head occurs also in each of three texts just quoted.

The bird in profile (the Egyptian Aleph) is also found on the Jerabís inscriptions.

A pillar on a square base, found in the Hamath stones, occurs also at Sakkarah.

The knife blade, a common constituent of Egyptian hieroglyphic letters, is also found on the Hamath stones.

The head of Im-hotep, or Horus, with the finger to the mouth, is very frequently reproduced on the Hamath and Jerabís stones.

The human foot, a well-known Egyptian symbol, is found on the longer inscription from Jerabís.

The oval, which resembles the eye, is an Egyptian symbol, and seems to recur on Jerabís No. 3, and in other cases.

The hand extended, or holding a dagger, is common on the Jerabís and Hamath stones; on the tomb of Hossi, in Egypt, the extended hand is also a symbol.

The human head is found on Hamath stones and Sakkarah hieroglyphics.

The cross, not uncommon on the Hittite stones, may be connected with the Egyptian Ankh, or with the Assyrian cross.

It may also be noticed, as cognate to the present subject, that some of

the emblems found on the brass plate obtained by M. Peretie from Palmyra (and which resemble closely the emblems found at Bavian over the king's head) are also identical with symbols on the Tomb of Hossi, or in the hieroglyphic text from Sakkarah, figured by Perrot, which appears also to be very ancient. One of the emblems of Bavian is also identical with one frequent on the Hamath and Jerabîs inscriptions; but the Bavian, with other Babylonian emblems, appear to symbolise the planets rather than to form inscriptions. Herodotus (II, 91 and 102) gives a curious account of a mark on the columns of Sesostris (now recognised by Professor Sayce as Hittite monuments), which the historian regarded as indicating derision of effeminate enemies. It seems possible that this mark is recognisable in the oval ring of the Hamathite inscriptions.

These remarks are offered with much diffidence, because it is possible that such comparisons have already been made by the learned authorities who have studied the Hamath inscriptions. It is, however, possible that a careful comparison of the Egyptian and Hittite symbols, by a scholar thoroughly conversant with hieroglyphics, might lead to interesting results, and if a cursory comparison leads to the identification of ten symbols as more or less intimately connected, longer study might, perhaps, give more definite indications. The Egyptians, like the Hittites, were an Asiatic people. They seem to have brought their system ready made with them when they entered the delta, and there is thus no *primâ facie* improbability in a common origin having existed for Hittite and Egyptian characters.

C. R. C.

THE NORTH BORDER OF ZEBULON.

THE north boundary of Zebulon is one of the most difficult to draw of all the tribe borders. The southern line has been greatly elucidated by the Survey identifications of Nehallal, Sarid, Maralah, and Abbez. On the north side the line has been indicated by the new sites for Hannathon, Niel, Achshaph, and Beth Dagon, but it will be found (see "Handbook to the Bible," p. 268, 3rd edition) that Dabbasheth remains unknown. The verse in which this name occurs reads thus:—

"And their border went up towards the sea (or west) and (to) Mar'alalah, and reached to Dabbasheth, and reached to the river (Nakhal) in face of Jokneam" (Josh. xix, 11).

It seems quite possible to understand that Dabbasheth is here mentioned as at the opposite extremity to the Kishon, or river facing Jokneam, and in this case it is to be sought on the north border. The latter is described in two verses of the same chapter (verses 14 and 27) as running from Hannathon (Kefr 'Anân) to the Valley of Jiphthah-el ("opened by God"), and again as going from Beth Dagon east to Zebulon (apparently, as in Josephus, also 2 "Wars," xviii, 9; 3 "Wars," iii, 1, a town), and to the Valley

of Jiphthah-el towards the north of Beth Emek and Neiel, and going out on the left (*i.e.*, north) of Cabul. This description is not easy to follow, but it seems at length to be explained by the following seven identifications, three of which I proposed before 1879, and two new, but agreeing in a most remarkable manner with the rest. The list reads thus :—

Beth Dagon	....	....	....	<i>Tell D'aûk</i> , C.R.C.
Cabul	....	....	....	<i>Kabûl</i> .
Neiel	....	....	....	<i>Y'anîn</i> , C.R.C.
Beth Emek	....	....	....	<i>'Amka</i> .
Dabbasheth	....	....	....	<i>Dabsheh</i> , C.R.C.
Zebulon	....	....	....	<i>Neby Sebelân</i> , C.R.C.
Hannathon	....	....	....	<i>Kefr 'Anân</i> , C.R.C.

The new proposals are Dabbasheth and Zebulon, and no question can arise as to the exactness of the reproduction in the Arabic of the older name. The line is one which would not be expected, but its correctness is shown by the way in which it fits together details which have hitherto appeared irreconcilable. Thus, for instance, Beth Emek is so far north of Achshaph and Cabul, if placed at 'Amka, that it seemed hopeless so to identify it in spite of the identity of name, while Zebulon at Neby Sebelân is also north of Ramah of Naphtali, and Dabbasheth at Dabsheh (though evidently the names are identical) seemed equally out of place.

If, however, the reader will take Sheet I of the reduced map, or Sheets III, IV, V of the large map, he will, I think, soon become convinced of the exactitude with which the north boundary of Zebulon may now be laid down. It begins (on Sheet V) at the Belus river, which is the Shihor Libnath, or "river of glass" (Josh. xix, 26), mentioned as the south boundary of Asher. It is true that great confusion has arisen because some have placed Shihor Libnath much further south, led by the context, "and to Carmel westwards;"¹ but the best authorities agree that the Belus—the traditional site of the discovery of glass—is the true Shihor Libnath. Immediately east of its course is Tell D'aûk, which represents Beth Dagon, just as 'Ain Dûk represents the Dagon near Jericho, and thence we must draw the line "towards the daybreak" at the foot of the low hills north of Cabul, or Kâbûl. Two miles north and rather east of this latter is Y'anîn, which preserves all the radicals of Han Neiel with the change of the last L into N (as Beitin for Bethel, &c., &c.), and we thus reach the mouth of the gorge where Wâdy Sh'aib flows out west to meet Wâdy esh Shâghûr coming from the north.

Turning now to Sheet III, we find a long spur running up northwards from Wâdy esh Shâghûr towards the Kul'at et Tufaniyeh, or "Flood

¹ Apparently Carmel ha Yamah would mean properly "the western Carmel," or Carmel of the Sea, perhaps to distinguish it from Carmel in the tribe of Judah. I have, however, pointed out (see volume of "Special Papers," p. 229) that the Samaritans apply the name Carmel to the shore as far as Acre. The "Samaritan Chronicle" speaks of the frontier of Carmel as far as Aecho.

Castle," which must retain some curious legend not yet collected. We have now to take into consideration the towns of Asher, which tribe here marches with Zebulon, and these include the following :—

Helkath ....	....	....	....	<i>Yerka.</i>
Hali ....	....	....	....	<i>'Alia, C.R.C.</i>
Beten ....	....	....	....	—
Achshaph ....	....	....	....	<i>Kefr Yasîf, C.R.C.</i>
Alammelech ....	....	....	....	—
Amad ....	....	....	....	<i>El 'Amâd, C.R.C.</i>
Misheal ....	....	....	....	<i>in Wâdy Maisleh, C.R.C.</i>
Beth Emek ....	....	....	....	<i>'Amka.</i>

This list serves to confine our line on the westward side in a most definite manner, although Beten ("The Knoll") and Alammelech (God-King) are, unfortunately, still unknown. El B'aneh has been thought to represent the first, and is not absolutely forbidden by the line proposed (see N. f. Sheet III), which may have run up the hill by it. Alammelêch was probably near Amad, far from the border, and as the Melek in question is very probably the Melkarth of Tyre, there may very likely be some reminiscence of the site in Wâdy M'ashûk, "Valley of the man beloved by women," which is the modern name (Neby M'ashûk) under which Melkarth now appears at Tyre (see Vol. III of "Memoirs," Appendix).

The general result of these considerations is the determination of the towns of Asher as lying in the plain or in the low hills, not more than 1,200 feet above the sea, whereas our boundary line, ascending northwards from Neiel (Y'anîn), is running on the high ridge about 500 feet above the Shephelah of Asher, and east of all the towns of that tribe. Skirting along the edge of the mountain district it passes Yanûh (Janohah), and reaches the ruin of Dabshel, 2,060 feet above the sea (Sheet III, lat. 33°, long. 35° 15'). At this point we are looking down on the slopes which descend northwards into the great ravine of Wâdy el Kurn, and it is therefore quite natural that the border should pass east from this point. Thus, Dabbasheth, according to the new identification, stands exactly at the north-west corner of the tribe, and is therefore most appropriately mentioned as a border point in the earlier and more general description of the line.

From this point to Hannathon, which was at the north-east corner of the tribe line, we have only two names mentioned to guide us, but these are quite sufficient.

If we turn to Sheet IV, lat. 33°, we at once find, some two miles east of the sheet line, Neby Sebelân, which is a village enclosing the supposed Tomb of Zebulon, son of Jacob. We find also a long valley head, draining northwards from the ridge of Jebel Heider, and forming the true course of Wâdy el Kurn. This is one of the most considerable valleys in Galilee, well fitted to form a natural boundary line between two tribes. As regards these two places, I propose to recognise in Neby Sebelân not only (as I proposed in 1877) the town of Zebulon mentioned by Josephus, but also

the Zebulon of the passage in Joshua (xix, 27), which it seems almost impossible to consider as referring to the tribe boundary simply. Indeed, so much has this been felt, that some have proposed 'Abellîn as the site of Zebulon—an idea which hopelessly confuses all the topography, and which has philologically a great objection.

The identification of Zebulon leads us to suppose that Wâdy el Kurn is the valley called Jiphthah-el in the Bible, and the great precipices along its course, especially north of Dabbasheth, might well account for the name "Cloven by God;" but no remains of the old title seem recognisable, and this is the case in other instances, as I have had occasion often to point out. Shihor-Libnath, Mejarkon, Elah, Cherith, Kedron, and many other famous valleys of the Bible, are now known by other names, and in the case of Sorek and Jezreel, the Hebrew title adheres, not to the valley, but to the town whence perhaps the valley was named, just as the modern Wâdys are named from the villages.

Having thus far followed the line of important natural features, we are now able to finish our tracing without any difficulty to Hannathon (Kefr 'Anân); for Râmeh (Sheet IV, O. f.) is in all probability Ramath of Naphtali (Josh. xix, 35), and must therefore be excluded north of our boundary. It is clear, then, that we leave the high mountains of upper Galilee, and descend into the flat plain of the Shaghûr, following the foot of the southern slopes of the great Jebel Heider ridge.

If the reader will refer to my "Handbook of the Bible" (Map No. 5, p. 252, and p. 269), he will find that great doubt existed as to the borders of Asher, Naphtali, and Zebulon, and as to the place where these three tribes marched. Having fixed Hannathon and Neiel, it seemed natural to join these two points by a line along Wâdy Shâghûr, which seemed evidently to be the proper Jiphthah-el. But our knowledge is now extended by the discovery of Dabbasheth and of Zebulon, and we are thus able to recognise the old identification of Beth Emek as a true one, and to draw the line more accurately than before, but without changing a single previous identification save that of Jiphthah-el, which was merely a conjecture.

It has not been thought necessary to swell this paper by discussing the east and south borders of Zebulon (the western being the sea, and therefore unnoticed in the Bible). It may be noted that the Survey has indicated Hannathon, Nehallal, and Sarid, all very important points, while Neah is very probably *B'aine*, which allows of the line being drawn from the Kishon to Tabor, and so north without any hesitation to Kefr 'Anân, thus coinciding with the natural lines of the country throughout the whole course. Dr. Grove's suggestion of Kefr Kenna for Kazin also appears to be confirmed by these investigations.

The new boundary gives another instance of the laws observable in the case of those traced for other tribes (*cf.* "Handbook," p. 270).

It is clear that the towns selected for notice in Joshua xix are so selected because they define the tribe boundaries. It is clear that the great natural features—valleys, watersheds, prominent spurs—are the real old tribe boundaries, just as they are the boundaries of the existing

divisions of the various districts. I have always felt, however, that this border of Zebulon was the one least certainly traced, for though the Survey suggestions for the territory of Naphtali, of Benjamin, of Dan, and of Ephraim, contain many striking novelties, they have been sifted much more completely than that now described, and they seem to me to have stood the test. The reader is invited to trace the present line on the map, and to form his own judgment as to the border of Zebulon, and he will find that the Survey identifications have cast equal light on every other border of the twelve tribes.

In the present case there are sixteen identifications on which the border line depends, and out of these only two of minor importance remain very doubtful. Out of the sixteen, ten are due to the Survey of Palestine, and were unknown to Robinson, Grove, or any other pre-survey authority. This instance alone seems, therefore, to indicate how much we have gained, from a Biblical point of view, by surveying the Holy Land.

C. R. C.

NOTES.

THE following remarks as to the last *Statement* may be worth noting.

1st. *Numbers of Israel*.—On p. 99, the writer, C. M. W., has made a curious mistake. He computes the space occupied by the Israelites, supposing their numbers to be 600,000, but this was the number of the men (Exod. xiv, 37); the children, women, and others are to be added; and if the writer of the passage is following the usual Oriental fashion of numbering only the men able to bear arms, the whole host would have been about three millions, but at least the number must be doubled.

2nd. *North Boundary of Palestine*.—One or two objections may be noted. *Shebrûh* is spelt with a cheth at the end (see the lists of Robinson, &c.), and is thus radically different from Sibraim (see p. 103), without mentioning that the Samech becomes Sin instead of Shin in Arabic. *Kureitein* (p. 104), is not derived from Kir, but from Kuryeh, the Hebrew Kirjath, and is an Arabic dual form. It appears to me quite clear that the Hauran of Ezekiel is the modern district of Hauran, which the writer denies; but this is perhaps a matter of opinion only. It is, however, not correct to say that Berothah is undoubtedly Beirût, for this has been disputed on very good grounds, and is still an open question. The suggestion of *June*h for Hazar Enan is also not satisfactory, for the J is the Hebrew Gimel, and although the Ain and Gimel are known to be interchanged occasionally, there are three possible sites for Hazar Enan which do not necessitate so violent a conversion of sound. The situation of Juneh seems to me inadmissible for Hazar Enan, and I hope to prove that the Mount Hor

which existed north of Palestine was the Lebanon inhabited by the *Khar*, or Phœnicians.

Siloam, p. 105.—A misconception seems here to arise, as there is certainly but one aqueduct from the Virgin's Fountain to Siloam, viz., that known to Gesenius, Robinson, and all later writers.

Tomb of the Twelve Patriarchs, p. 109.—It seems to have escaped notice that these have been found by the Surveyors in Shechem, where Jerome also knew them, though the Samaritans have a different belief (see "Memoirs," vol. ii, pp. 218, 220).

Rachel's Tomb.—Herr Schick says (p. 111) that the tomb north of Kustul is sometimes called Kubbet Rahel. I have asked on the spot more than once, but never was able to confirm this view. But even if it were the case, this site could not possibly represent the Tomb of Rachael, which is specially mentioned as near Ephrath (Gen. xxxv, 16). This position agrees exactly with the border of Judah according to the line which I have proposed ("Handbook to Bible," p. 258).

C. R. C.

THE ROUTE OF THE EXODUS.

WHILST studying Canon Scarth's article on "The Route of the Exodus," together with the four papers on the same subject that appeared in the last *Quarterly Statement*, and Brugsch Bey's statement of his theory, I have been forcibly reminded of the well-known story of the two knights riding from opposite directions, and disputing about a certain shield that was suspended between them, which was silver on the one side and golden on the other. The antagonists on the vexed question of the Route of the Exodus seem to me to represent these knights, and I have worked out a theory which tends greatly to harmonise the various routes proposed by Brugsch Bey, Captain Conder, Canon Scarth, and other authorities, by showing the Yam Suph to present a different aspect according to the side from which it is viewed, like the shield in the allegory.

A year or two ago, when standing on the shore of the Red Sea near Suez, I felt my heart thrill within me at the thought that my feet were pressing the very spot whence the children of Israel passed over dry-shod. I then held the view which I had embraced with unquestioning faith in the days of childhood; but I have since become convinced of the physical impossibility of the Red Sea being driven back at this point by the east wind.

Unless, therefore, we are prepared to translate the Hebrew words rendered "east wind" in our Authorised Version as simply a "contrary wind," we must, I think, give up the formerly received identification of the crossing-place of the Israelites; but we are not thereby called upon to cease calling the Red Sea the Yam Suph.

In ages past the Red Sea appears to have been continuous from the modern Aden to a point north of Zoan, and probably at one period it extended as a strait between the Indian Ocean and the Mediterranean. In course of time, however, its entrance into the latter sea became silted up, and it then presented the appearance of a serpent's forked tongue, the two forks being Lake Menzaleh and Lake Serbonis.

It was then so full of algæ as to receive the appellation "Sea of Seaweeds." By-and-by the centre part dried up, leaving isolated basins of brackish water, to the south of which was the Red Sea itself; to the north, Lakes Menzaleh and Serbonis, the two latter forming one whole. Much as we find the brook Kedron bearing the same name throughout its course, though a great part of that course is lost to sight far underground, so the northern and southern portions of the Red Sea, though now severed from each other, still kept the same designation, namely, that of "Sea of Seaweeds," which the Israelites translated by *Yam Suph*.

Even at the present day the appellation "Sea of Seaweeds" continues to be appropriate to the Red Sea proper; but from the moment when its northern portion (afterwards called Lakes Menzaleh and Serbonis) became severed from the southern, and ceased to have any connection with the sea, the characteristic vegetation of this sheet of water underwent a change, and reeds, such as papyri and flags, took the place of algæ. Inappropriate as the English name "Sea of Seaweeds" would now have become to this large lake, yet the Hebrew term was not at all so, for *Yam Suph* bears the meaning of "Sea of Reeds," as well as that of "Sea of Seaweeds," *Suph* or *Soph* being used in Exodus ii, 2, to designate "flags," whilst in Jonah ii, 5, the same word conveys the meaning of seaweeds.

I think Canon Scarth has shown conclusively that the *Yam Suph* of Exodus x, 19, into which the locusts were blown by "a west wind," was Lake Menzaleh; for, as he points out, "a north wind would be needed to blow them forty or fifty miles over the desert to reach the Red Sea at Suez." This would help to fix the starting-place of the Israelites at the modern San, the ancient Zoan, or Rameses, an identification upon which most authorities are now agreed. No such unanimity, however, prevails regarding the subsequent stations of the Exodus.

Powerful as are the arguments adduced by Captain Conder (in the last *Quarterly Statement*) against the theories of Canon Scarth and Brugsch Bey, I must confess to not finding them convincing.

In the first place, with regard to the ancient physical features of the Delta, the fact must be borne in mind that not only have Roman graves dating from an early period been discovered at Port Saïd, and ancient Roman towns not far to the south of it, but that Greek antiquities of the time of Ptolemy have been lately found upon islands on the bosom of Lake Menzaleh, close to Port Saïd, where Greek cities were situated in the days of that great geographer, thus proving that in Ptolemy's time the towns of Egypt extended to much the same north latitude as Port Saïd does now. As to the absence of water on a portion of the Kantara route, the difficulty would be no greater than that which the Israelites had after-



wards to encounter, when, as we read in Exodus xv, 22, "they went three days in the wilderness and found no water."

Then with regard to the objection to the Israelites with women, children, flocks, and herds, having taken the long daily marches which the route proposed by Canon Scarth is supposed to imply, I would answer, in the words of Mr. Pickering Clarke, "Are we obliged to allow only three days after leaving their homes before the Israelites made their encampment at Pi-hahiroth? The Bible account does not say so."

The close agreement of the localities mentioned in the papyrus dating from the reign of Seti II, with those referred to in Exodus xiii, xiv, as the camping-places of the children of Israel, seems more than merely accidental. The route proposed by Canon Scarth coincides with that followed by the pursuer of the fugitive slaves nearly 3,000 years ago as far as Migdol, where it trends north-westwards, leaving the caravan route to Syria; for here God commanded the Israelites to "turn," because He "led them not through the way of the land of the Philistines, although that was near; but God led the people about through the way of the wilderness of the Yam Suph;" and in thus turning they continued to keep the Sea of Reeds close on their left as they had done ever since leaving Rameses.

The identification of Pi-hahiroth, originated by Canon Scarth, is most striking in its exact fulfilment of all the requirements of the Bible narrative, and not less so is his localisation of the crossing-place of the Israelites from thence through the Yam Suph to the bank of sand which divides this Sea of Reeds from the Mediterranean.

Many people have, however, been led to reject the Canon's theory altogether, because of the subsequent march to Port Saïd and back, which he imagines the children of Israel to have undertaken; but it seems to me that the necessity for this march may be obviated by supposing Lake Menzaleh and Lake Serbonis to have formed one Sea of Reeds at this period, connected opposite Pi-hahiroth by a somewhat shallow strait. When the east wind blew, this strait would become a broad isthmus of sand, a watershed between the two lakes over which the Israelites would cross, having the waters of the Sea of Reeds as "a wall unto them on their right hand, and on their left." Arrived at the sandbank before mentioned as the northern boundary of the Yam Suph, they would turn to the south-east and continue along it, skirting the seaward shore of Lake Serbonis,¹ thus having still a wall of waters on either side, the left hand wall being now the Mediterranean, the right hand one the Sea of Reeds as before.

¹ As in after times (when the strait dividing Lakes Menzaleh and Serbonis became permanently dry land) a high road from Asia is said to have run past the Temple of Zeus Casius along this very sandbank to the north of Lake Serbonis, it is unlikely that in the days of the Exodus it was intersected by either the Pelusian mouth of the Nile, or the inlet of the Mediterranean described by Mr. Chester in the *Quarterly Statement* for April, 1881, though it is possible the Mediterranean may have occasionally broken over the strip of sand in a west wind, and that its doing so to the rear of the marching Israelites may have added to their safety, and aided in the destruction of their foes.

Meanwhile, Pharaoh's host had begun crossing over the natural bridge, but the east wind ceasing to blow, the isthmus disappeared beneath the rising waves, and the Egyptians perished in the Yam Suph, or sank into the numerous quicksands abounding in the neighbourhood of Pi-hahiroth ; "the sea covered them," and "the earth swallowed them" (Exod. xv, 10, 12).

Being now freed from all fear of pursuit, the Israelites took a southerly course, which led them first for three days through the desert of Shur. They seem, from Numbers xxxiii, 8, to have occupied another three days in traversing the wilderness of Etham, so that it was not until the evening of the sixth, or the morning of the seventh day after they had quitted the shores of the Sea of Reeds, that they reached Marah, which appears to be satisfactorily identified by Canon Scarth and Brugsch Bey with the Bitter Lakes. Elim may possibly be Ayún Músa (the "Wells of Moses") ; at all events it is clear, from Numbers xxxiii, 10, that the day after leaving Elim the Israelites encamped by the Yam Suph, which cannot here mean, as before, the Sea of Reeds, but must be used in this verse to indicate the Sea of Seaweeds, or the modern Red Sea ; the double signification of "Suph" or "Soph," as I have before pointed out, making the appellation equally appropriate to the Red Sea as to Lakes Menzaleh and Serbonis, and the probability of a connection between the three having existed in times antecedent to the Exodus, being greatly enhanced by the fact that fossil shells, of a species now peculiar to the Red Sea, have been discovered in the bed of Lake Timsah. Lesser reasons than these, however, would have sufficed to induce the Hebrews to bestow an identical name on more than one piece of water, for in 1 Kings ix, 26, we find them applying the very same term of Yam Suph to the Gulf of Akabah, thus proving that this ancient Semitic race was not so precise in its use of geographical names as our modern English topographers are. The Greeks seem to have been equally vague, and, as Canon Scarth reminds us, seeing that Herodotus and other Greek writers carry the name of *ἐρυθρά θάλασσα* to the Persian Gulf, and even confound it with the Indian Ocean, it is not to be wondered at that they should not confine the title of "Red" to the sea now known by that name, but should bestow it also on the Sea of Reeds, which was tinged deep red at the time of the inundation of the Nile by the Ethiopian soil brought down by the Tanitic branch of that river, which flowed through the Yam Suph. The Septuagint, instead of translating Suph, substitutes for it the nomenclature more familiar to the Greeks, and in Acts vii, 36, and Hebrews xi, 29, the Septuagint text is followed.

A. G. WELD.

WHERE IS CANA OF GALILEE?

By the Rev. W. T. PILTER, M.R.A.S.

(Formerly Missionary in Palestine.)

THE traditional site of the village where our Lord wrought His first miracle has, for the last five or six hundred years, oscillated between Kâna, a ruined village, eight miles, as the crow flies, due north of Nazareth, and *viâ* Sefûriyeh, and Kefr Kenna, a village four miles north-east of Nazareth, *en route* for Tiberias. People at home usually follow Dr. Robinson in taking Kâna to be the authentic site, while those who have visited Palestine are almost certain to have seen Kefr Kenna, though not Kâna, and favour the place they have seen,—a species of vice not confined to travellers.

For reasons which will presently appear, in this matter of Cana of Galilee I am disposed to join the tourists' chorus.

But we have first to settle with Dr. Robinson. He informs us¹ that Kâna was known both among Christians and Moslems only by this name Kâna el Jelîl; while the same name was sometimes applied, by Christians alone, to the village of Kefr Kenna, because, apparently, the monks have taught them to do so. He further reminds us that Kâna el Jelîl is precisely the rendering of Cana of Galilee in the Arabic New Testament. We might add that the same rendering is preserved in the revised Arabic translation of Drs. Eli Smith and Van Dyck, and that it is exactly the equivalent in the modern vernacular of Palestine of the *κανὰ τῆς Γαλιλαίας* of the Greek Testament, or *קְנַה יִשְׂרָאֵל בְּגִלְיָל* of the Hebrew Version of the New Testament. Naturally, therefore, if Kâna el Jelîl were the original native name of the now ruined northern village, it would need very cogent evidence indeed to prevent us identifying it with the Cana of Galilee of St. John's Gospel.

But, so far as I can gather, the only authority Dr. Robinson has for his full name of Kâna el Jelîl was his friend Abu Nâsir, an intelligent Arab-Greek Christian of Nazareth. Against Abu Nasir's statement, that the place "was known both among Christians and Moslems only by this name Kâna el Jelîl," we have the evidence of the Palestine Exploration Fund's map, which shows it only as Kâna, or Khârbet Kâna. But we have fuller evidence on the subject, and almost contemporary with Dr. Robinson's—that of Dr. W. M. Thomson in the first edition of "The Land and the Book" (p. 425). He says that when on the road from Tiberias "I pestered everybody I could find on the right and the left—farmers, shepherds, Bedawîn, and travellers—with inquiries about the place where the *water was made*

¹ Robinson, "Biblical Researches" (1st edition), vol. iii, p. 205. In his 3rd edition I see Dr. Robinson omits "el Jelîl" from the name and writes only Kâna."

wine. With one consent they pointed to Kefr Kenna. Some of them knew of a ruin called Kâna, on the north side of the great Plain of Buttauf, but only one had ever heard of the word Jelil as a part of the name; and, from the hesitancy with which this one admitted it, I was left in doubt whether he did not merely acquiesce in it at my suggestion. It is *certain* that very few even of the Moslems know the full name Kâna el Jelil." The evidence now shows that this is only another of the several Kânas which are found in Northern Palestine; the name may be applied to any place where *reeds* grow, as, *e.g.*, to the spring of the little village of Er-Reineh, between Nazareth and Kefr Kenna, which is called (see the Survey map) Ain Kâna.

Although Dr. Thomson's evidence is so important against the identity of the name, he is disposed to adopt Dr. Robinson's identification of Kâna as Cana of Galilee on other grounds, which we have now, therefore, to examine, viz., the evidences of tradition and natural topography.

We will first hear Robinson and his own authorities. He says (p. 205) "that it is only since the sixteenth century that monastic convenience has definitely assigned Kefr Kenna as the site" of Cana of Galilee. Quaresmius (a Latin monk and Papal Commissary, who resided about twelve years in the Holy Land, and whose book was printed 1634-39) "relates, that in his day, two Canas were spoken of among the inhabitants of Nazareth and the vicinity; one called simply Cana of Galilee (Kâna el Jelil), and the other Sepher Cana (Kefr Kenna). . . . He decides, however, very distinctly for the latter place, because of its being nearer to Nazareth, and having some ruins [of a church built to commemorate the miracle]; without, however, as he says, venturing to reject the other tradition. Yet it was probably the authority of this very writer which tended, more than any anything else, to fix attention upon Kefr Kenna, and throw the true Kâna into the shade; for from that time forward the latter is very rarely noticed by travellers. It may be remembered, too, that in the time of Quaresmius, the church and convent at Nazareth were first built up, after the desolations of many centuries; and this circumstance conspired to give currency, among travellers, to the view which the monks adopted respecting Cana."

It appears from this that when, according to Robinson, the monks began to adopt Kefr Kenna as the site of Cana of Galilee, they could point to some old ruins still there commemorating it as the true site; it also appears that for some centuries before this it was not so convenient for travellers to visit Kefr Kenna in consequence of the convent at Nazareth being then desolate.

It may have been that the "monastic convenience" Robinson speaks of had led the monks, when driven from Nazareth, but still maintaining a good footing in Sefûrieh, to fix upon the village of Kâna—so accessible from Sefûrieh, and bearing the name of Cana—as Cana of Galilee. The testimonies Robinson quotes, of travellers earlier than Quaresmius, support this conclusion as much as his own—to wit, Adrichomius, near the close of the sixteenth century; Anselm, about A.D. 1507; and Breydenbach, A.D. 1483;

the first and last of these apparently quoting "earlier writers." "But the most distinct notice of the Cana of those days," says Robinson, "is from Marinus Sanutus, about A.D. 1321" (whose account, however, may have been taken from Brocardus, *circa* A.D. 1280). "In coming from Ptolemais ('Akka), he says, the most usual course was to proceed first eastwards to Cana, and thence south, through Sepphoris to Nazareth. All this leaves no doubt that the site of Kâna el Jellî is here meant. At that time the place was professedly shown where the six waterpots had stood, and also the triclinium where the feast was held; but the whole was in a crypt, or cavern, underground." This piece of evidence indicates pretty clearly that this was but a "show place" for pilgrims devised by the monks. Marinus went the "usual course" of the different sites which were "professedly shown." And it is morally certain that this site was a monkish invention, for the monks are fond of locating the scenes of Bible stories in caves (witness the Chapel of the Anunciation in Nazareth, and that in which the Apostles' Creed was composed on the Mount of Olives); but no Jewish feast, such as that of the marriage at Cana, was ever held in a cave. In the time of Saewulf, about A.D. 1103, there was a monastery "still standing," called the Architriclinium. Now, although Robinson merely mentions this piece of evidence, I confess that it seems to me to be the most striking of all he adduces in his favour. The architriclinium at least testifies that there was already a tradition that in this place the first miracle of Christ was performed. The tradition may not have been very old, but it was there. And where was this place? "Nearly six miles north of Nazareth, on a hill." Both Kâna and Kefr Kenna are on hills, but the former *ten* and the latter a little over four English miles from Nazareth. But an English mile is longer than Saewulf's Roman ones, and this difference would make Kefr Kenna nearly *five* miles and Kana *eleven miles from Nazareth*, and, therefore, Saewulf speaks evidently of Kefr Kenna, and clearly not of Kâna; moreover, he apparently saw it just before the traditional site was changed, "to suit monastic convenience," to Kâna.

The only remaining definite witness Robinson calls to support his view is St. Willibald, who visited Palestine in the eighth century. But St. Willibald's evidence is as follows:—"And having there (*i.e.*, at Nazareth) recommended themselves to the Lord, they proceeded to the town of Cana, where our Lord turned water into wine. A large church stands there, and near the altar is still preserved one of the six vessels which our Lord commanded to be filled with water to be turned into wine; and the travellers drank wine out of it. They remained there one day, and then continued their journey to Mount Tabor,"¹ thence to Tiberias, Magdala, Capernaum Bethsaida, Chorazin, and Dan. The route given is vague from its brevity, but the "Cana" manifestly suits Kefr Kenna rather better than Kâna. Indeed, if Kâna were meant Willibald must have also seen Sefurieh *en route*, an important place to pilgrims, with a cathedral which, according to the tradition of at least two centuries (*i.e.*, from the time of Antoninus

¹ T. Wright's translation of Willibald, in "Early Travels in Palestine," p. 16.

Martyr), was built on the spot where the Virgin Mary received the salutation of the Angel; yet Sefurieh is not referred to by Willibald in the remotest way; we thence infer that he did not see it, and therefore did not go to Kâna.

Before we come to the evidence of the Scripture period it may be well to have a description of Kâna before us. According to Dr. Thomson, "a careful examination of the site (of Kâna) led to the conclusion that there were never more than fifty houses in the place. . . . There are some ancient cisterns about Kâna, . . . but no fountains or well,"—and hence it must always have been even more insignificant than Nazareth, which possesses its own spring. It would thus have been remarkable indeed if an inhabitant of Kâna had said, as Nathaniel of Cana of Galilee said, "Can there any good thing come out of Nazareth?"

There are two other arguments of some, though not of great weight in deciding against Kâna. The first is, whence came the water to fill "six waterpots of stone, . . . containing two or three firkins apiece?" It may have been there "a practice" to keep "water in large stone pots, each holding from eighteen to twenty-seven gallons,"² but those at the feast in question were empty, and filled at the command of Jesus. Now 130 gallons or so might have been easily enough obtained at that period of the year, apparently spring-time, from a spring such as that of Kefr Kenna; but one might have expected the villagers of a little place of not more than fifty houses to have raised some objection to such a quantity of water being carried off at once from a common *cistern*. The second difficulty is one of travel. Cana of Galilee was reached on the "third day" (John ii, 1), after leaving the Baptist at Bethabara (John i, 28). Assuming Bethabara to be the same as Beth Nimrah, this would be eighty miles distant from Kefr Kenna—a sufficiently long journey to be accomplished "on the third day" without adding five or six miles.

One argument, which I confess has always weighed much with me in favour of Kefr Kenna, is the naturalness of its position in the Galilean circuit,—whence, so far as we have any evidence, all the disciples seem to have come (excepting only the one from Judea, the traitor), and also the natural way in which all the New Testament references to Cana of Galilee fall in with this site. Kefr Kenna is on one of the two ordinary routes from Nazareth, "where He was brought up" to Capernaum, where He afterwards took up His abode;—it is thus on the road to the Mount of Beatitudes and the Galilean Lake. It seems natural, therefore, that Philip of Bethsaida should have a friend dwelling at Kefr Kenna; and Capernaum might be a common meeting-place for the disciples, as it would be "the city" at that time to Kefr Kenna and Bethsaida, but not to Kâna. This idea receives some confirmation from all the New Testament references to Cana, as, *e.g.*, from the fact that when our Lord, leaving Judea, was welcomed

¹ "The Land and the Book," vol. ii, p. 303, new edition (1883).

² Dr. E. D. Clarke's "Travels," quoted by Canon Westcott in the "Speaker's Commentary" on St. John.

into Galilee, He stayed again at Cana, and the centurion of Capernaum, hearing that He had come "into Galilee," went to Jesus, perhaps expecting to find Him in His own city of Nazareth; but while on his way thither found Him at Kefr Kenna, through which He would naturally pass *en route* for Nazareth.

We must bear in mind another fact, which we shall have to make more use of immediately, namely, that, so far as appears, there never was any thoroughfare passing Kâna,—nothing but a bye-road which ended with the little village, while Kefr Kenna has always been on a much used thoroughfare, as well as in proximity to the Roman road, and so, humanly speaking, well adapted as a missionary centre of the Great Teacher.

We come, lastly, to the evidence of Josephus,¹ who appears to describe Cana as Cana of Galilee to distinguish it from Cana in Cœlosyria. The requirements of Cana of Galilee, as referred to in his "Life" (§ 16), would be most satisfactorily met by Kefr Kenna, as its situation would enable him to keep an eye on both Sepphoris (Sefurieh) and Tiberias at the same time; while one cannot see how an out-of-the-way village, containing not more than fifty houses, and a limited water supply, could have accommodated Josephus and his soldiers. So, again ("Life," § 71), Kâna was too insignificant and obscure to be specially watched by a Roman army. Finally, it would really appear too absurd of Josephus to ask to believe ("Wars," I, xvii, 5) that the "headquarters" of Herod the Great were at a village called Cana" (of Galilee, § 3), if that village could count scarcely fifty houses, little water, and no proper road!

To sum up. First, Dr. Robinson's chief argument of the identity of name of his Kâna and Cana of Galilee, upon which he might trust if it were real, is shown on examination to be untrustworthy. Secondly, the evidence of tradition is not in favour of Kâna, but of Kefr Kenna, except just enough to show that at a particular period "monastic convenience" temporarily shifted the site from Kefr Kenna to Kâna; that it was a monastic device being further testified by the fact of a cave being resorted to. Thirdly, that Kâna, from its obscure situation, its smallness, and deficient water supply, fails to meet the requirements of the Cana of Galilee of the New Testament and of Josephus, while Kefr Kenna fulfils all the conditions.

One difficulty remains to prevent us absolutely identifying Kefr Kenna with Cana of Galilee; it is that of *name*. The difficulty is, not that it has lost or changed its old name, for this is quite a common thing in Galilee; witness, *e.g.*, Bethsaida, Gath Hepher, Mount Tabor, and the Plain of Edraelon or Jezreel, and in Judea of Emmaus—to mention just one place which Mrs. Finn has lately discussed with so much lucidity and force in these pages. The difficulty is that *all* the Syriac versions insert *t* before the *n*, and read *Kotna* or *Kotneh*, which, as Canon Westcott says, may point to local knowledge; for the Syriac was the vernacular version of Palestine probably from the second century of our era. The meaning of the Syriac word, however, gives us no clue to the place. Could any village

¹ "Antiq.," XV, v, 1; "Life," §§ 16 and 71; "Wars," I, xvii, 5.

or ruins be found in the proper quarter called Kotna, the question might be set at perfect rest ; but neither the Survey map shows us such a place, nor does any ancient traveller speak of one. What, then, shall we conclude as to Cana of Galilee? Why surely the same as the Arabs before us, that it is Kefr Kenna¹—The Village which has Changed its Name indeed !

THE HOLY SEPULCHRE.

I HAVE read with great interest Captain Conder's paper in the April number on the discoveries at what is called "Jeremiah's Grotto." I know the ground well, having both in 1872 and 1875 camped close to the place ; in 1872 I studied carefully the so-called "Holy Sepulchre," and was convinced it had no true grounds for the title. With my friend Tyrwhitt Drake and Bishop Gobat I often discussed the position of "Calvary." They believed that its position must have been on the northern side of the city, at or about a knoll which overlooks the Valley of Jehoshaphat, and close to the northern road (not far from Jeremiah's Grotto). I painted a picture of the spot in 1872, which was exhibited in London, and engraved in the *Graphic*, with a short notice propounding the idea that *that* was the true site of "Calvary." I give up my idea of that site for Captain Conder's, which is close by, and am only glad to find I was on the right track.

There is a passage in the Gospel of Luke of great importance, xxiii, 26 : "Simon, a Cyrenean, *coming out of the country*," marks, I think, the position of Golgotha.

There are four great roads coming into Jerusalem :—

That from the *south*—the *Hebron road*.

That from the *west*—the *Jaffa road*.

That from the *east*—the *Jericho road*.

The last, the *north* road, "*coming out of the country*," coming from Galilee, Samaria—from the very heart of the country. Luke is always so exact in his descriptions, that I think his expression proves that Golgotha was on the *northern side*, and being "nigh to the city," and "without the gates," is an additional proof of the soundness of Captain Conder's view.

HENRY A. HARPER.

¹ From كفر a village, and كنا to signify by an improper or changed name (as, *e.g.*, by a surname).

THE EXODUS.

AMONG the four or five papers on the Exodus in your last *Quarterly Statement*, I am greatly pleased at the contribution by Mr. C. Pickering Clarke. He accepts, at page 23, as distinctly even as I have done myself, what I have so long contended for, viz., that the fifth and sixth Anastasi papyri are distinctively papyri of the Exodus : that is to say, that masses of Semitic people are described therein as flitting backwards and across the scene. Mr. Clarke (p. 23), talking of the marshy country east of the fortress set up by the Regent Hotep-hi-ma, or Bai-n-Ra, says, "The administration of the eastern marshes is clearly set forth in the Egyptian papyri, having its bureau at the royal city Pi-Rameses ; and the foreign people again were under the control of regularly appointed officers of their own, who were responsible, we may suppose, to the central government of the country."

The reason, however, why I can hardly quite agree in this flowery description is that when the Semites rose in insurrection, the government was no longer central, but anarchical. Both Rameses II and Seti II died blind (see Pliny, Herodotus, and Diodorus), and practically everything fell into the hands of the great regent Bai-n-Ra, who died tributary to the Hittites, and thus eventuated the Exodus. Unfortunately, to the best of my knowledge, only two people in England would be able to read off Hieratic. There may be others, of course. Let them tell us, yes or no, was the military earthwork Tabnet cut out in twenty-three days, or was it not ? Was it or was it not dug out avowedly for the accommodation of the foreigners in the temple of Nebt-hotep ? Was or was not a four days' journey arranged for the Semites ? Were 178 royal robes given or loaned out by Egyptian officers to the foreigners for the occasion ?

These things are not quite clear, and it is curious that from about the middle of the papyrus (6th Anastasi) the Regent and his friendly Shasu are brought forward from Edom. Perhaps it is a symptom of the last struggle that poor old Seti sent down an architect from Thebes to put things right. Truly, however, let us allow he was probably the greatest architect that this world has ever known, viz., Bek-n-Chonsu.

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VARIETIES.

I WISH to point out one or two points in Captain Conder's recent observations :—

1. In incorrectly saying (1883, p. 102) that I seem to identify *Ephron* with *Ephrath*, he has confused the former name with

- Ephraim*. This name (52) may easily have taken the place of *Ephrath*, by the final פ being altered (as I said) into יפ.
2. *The Garrison* (1883, p. 101). Samson's last exploit was breaking Philistine pillars. But that Jonathan's first had to do with pillars erected by the Philistines is an idle fancy on the part of Captain Conder. If he is satisfied about the rocking of the *pillar*, what is meant by "Both of them *discovered themselves unto the 'pillar'* (!) of the Philistines?" (1 Sam. xiv, 11.) Should the grammar allow the words in xiv, 15, to be rendered "all the people of the *pillar*," the lexicon certainly will not, since the word **מַעֲבָד**, used seven times in this episode, never means a "pillar." It is an entire mistake to say "it is rendered 'pillar' in other passages of the Old Testament."
 3. *Gath* (1880, p. 216). Captain Conder made a strange mistake when he said that I had "fallen into the same error with Mr. Saunders in supposing the *Gh* or *Ghein* to represent the Hebrew Gimel." Apparently he overlooked the small but important word *if* at the beginning of the sentence.

W. F. B.

THE TOMB OF DAVID IN THE CITY OF DAVID.

If Captain Conder be right (N.B., I do not for a moment believe that he is) in his identification of the Tomb of Nicodemus (so called) with "the monuments of the Kings of Judah (1883, p. 73), including the Tombs of David and Solomon," then this is certainly the grandest discovery yet made at Jerusalem.

Mr. Fergusson in 1878, having four ill-sorted kings to dispose of, made them up into one lot and said ("Temples," p. 56), "These four may have been buried in those sepulchres always known to have existed under the western boundary of the Church of the Holy Sepulchre." Captain Conder, always striking, but sometimes missing the mark, seems to have seized on these tombs for a nobler object, and says in the "Handbook" (p. 342), "It seems quite possible that the Church of the Holy Sepulchre preserves the monument of the nine chief kings of Jerusalem."

This "possible" of 1879, developed into "hope to show" in 1882 (*Quarterly Statement*, 157), and has now in 1883 culminated, "after ten years of study," in a "fact" (!!). Surely error grows apace.

Since 1877 I have believed that the Tomb of David was on Ophel (so called), and as the newly discovered aqueduct clears up the Siloam mystery, I do not hesitate (after groping awhile in the dark) to assert that the tomb is on that hill somewhere between Siloam and the Virgin's Fountain. Since 1878 it has been patent to me that the City of David was solely and

entirely on Ophel so called. Accordingly, I now invite, challenge, and defy anybody, from the river to the ends of the earth, to upset this conclusion.

Yet in self-defence I must demolish Captain Conder's "fact," by showing—

- (1) That his process of reasoning is defective, even *if* the evidence he produces be trustworthy ; and
- (2) That this evidence is either not trustworthy, since it is contradictory, or else it is obviously untrue, since it contradicts the Bible.

Captain Conder's case seems to be this :—

1. David was buried in the City of David.
2. The tombs named are the only ancient Jewish sepulchres visible in Jerusalem.
3. These tombs have some peculiarities, and so had the Sepulchre of David, according to Josephus.
4. Therefore it is a *fact* that these sepulchres represent the Tomb of David.

A parallel case will show how inconclusive is an argument like this. For instance :—

1. Goliath was killed by a stone in the Valley of Elah.
2. The only stone now visible to me was once in Wâdy es Sunt.
3. This stone has peculiarities : *e.g.*, it is smooth and was taken to Jerusalem ; the stone (1 Sam. xvii) was also smooth, and may have been taken to Jerusalem while still embedded in Goliath's head.
4. Therefore it is a "fact" that the stone before me killed Goliath.

Unfortunately for the interest of my museum the same might be said of many a stone gathered out of the brook, and similarly many a tomb discovered in Jerusalem might be declared to be the Tomb of David. This kind of argument is of no value whatever.

Next as to the character of the evidence. In the "Handbook" (p. 341) it is said, "From the Talmud we learn that all tombs were outside Jerusalem, except those of the family of David, and that of the prophetess Huldah." From this it might seem that Captain Conder was supported by the authority of the Talmud (whatever that may be) in saying (1880, p. 102), "It (*i.e.*, the Tomb of Nicodemus) is the only undoubted Jewish tomb in Jerusalem." It is added, however (p. 341 *supra*), "Although it was not considered certain whether some 'tomb of the depth' or hidden sepulchre might not exist unknown beneath the surface" (Parah. iii, 2). Captain Conder has further given (1877, p. 134) several passages from the Mishna to the effect that "sepulchres dating from an early period existed within the walls of Jerusalem." One passage is very curious, viz., "All the sepulchres within Jerusalem were transferred outside the walls except those of the family of David and of the prophetess Huldah." This is the passage of the Talmud referred to above, the truth of which seems to depend on some *sepulchres* (!) having been transferred to outside the walls. Josiah transferred ashes from Jerusalem to Bethel; we moved bones from

Bethel to Sidon ; but who, except an American, would transfer a sepulchre ? If the Talmud proves anything, it is that there were other tombs in Jerusalem besides the royal sepulchres. But, if there were others, why must the only one we can now see be of necessity the Tomb of David ?”

Instead of delaying over the peculiarities to which I have already objected (1880, p. 167), it will suffice to show that the tomb claimed as that of David cannot really be such, since it is at least half-a-mile out of its proper place, though it must be admitted that the power which could transfer sepulchres outside the walls could undoubtedly alter their position within.

David was buried in the City of David. Captain Conder claims that the part near the Holy Sepulchre was the City of David because this part, “according to the majority of authorities, is the site of the Akra of Josephus, and Akra, according to LXX, was Millo, and Millo was in the City of David.” I readily admit that the Acra of Josephus was on the site of the City of David. But have we really come to this, that the site of Acra is to be settled, not by argument, but by the votes of a majority ? Surely not.

Josephus identifies his Acra with the Acra of Maccabees, which was the City of David (1 Macc. i, 33). The question then is, where does Josephus put Acra ? I answer, “Solely and entirely on Ophel so called, just where the biblical evidence puts the City of David.”

The evidence that Josephus places Acra, or the Lower City, on A, the hill south of the Temple, and not near B, the Holy Sepulchre, is as follows:—

1. Jerusalem stood on two hills, those of the Upper City and Acra, and was defended where necessary by *three* walls. Acra at B would be defended by *two* only, while Jerusalem would in this case stand on *three* hills, viz., the Upper Hill, A, and B.
2. These two hills had deep valleys on the outside. Acra at B would have no deep valley on the outside.
3. Josephus repeatedly gives the title of Acra, or the Lower City, to A, but never to B, which he describes as “the suburbs.”
4. In 15 “Ant.,” xi, 5, the first-named gate was one near Wilson’s Arch; the one leading to the other city, by a great number of steps into the valley, &c., was one at Robinson’s Arch, while the deep valley along the entire south quarter of the city is the valley south of the Upper City. If it is urged that the gates are here named in *strict local order*, then there is the following crushing reply.
5. In 4 “Wars,” ix, 12, much more must there be local order in the description of the four towers. One of these was at the north-east corner of the temple, another above the Xystus ; the “third” at another corner over against *the Lower City*. This must obviously be the corner near Robinson’s Arch, which was thus over against Acra. To the advocates of “local order” it is left to escape from their own dilemma.
6. In 5 “Wars,” iv, 1, the *third* hill (*i.e.*, the Temple) was parted by a

broad valley from *the upper city*, and not from Acra. This valley was filled up in the line of Wilson's Arch in order to join the *Upper City* to the Temple.

7. Acra is said to be ἀμφίκυρτος. This word means *gibbous*, or *with sloping sides*, but not "in the form of a *crescent*," as Captain Conder describes B.

The placing of Acra of Josephus anywhere else than south of the Temple is one of the most remarkable errors to be found in literature.

It has arisen apparently from two *false* statements on his part: (1) that the Acra was originally higher than the Temple. To suit this notion he deliberately altered the *went up* in 1 Macc. vii, 33 into *came down* (!) in "Ant.," 12, x, 5; and (2) that the Acra was levelled by Simon. This exploit is not so much as mentioned in 1 Macc., and is indeed in direct opposition to two passages in that book (xiv, 37; xv, 28, 33-35).

Thus there is not a spark of evidence that Josephus puts Acra at B; all the evidence in the "Wars" puts it at A. Captain Conder has yet to show that the City of David was near the Holy Sepulchre.

Suppose, however, that the City of David was at B. Captain Conder also says the Upper City formed part of the City of David, because Josephus in his "Wars" says David named the Upper City φρ ὕριον. (Here Josephus makes another *wrong* statement, which he afterwards honestly corrects in 7 "Ant.," iii, 1, where he names the citadel of the Jebusites ἄκρα). And further, Captain Conder admits that "the sepulchres of David" (Neh. iii, 16) were on Ophel, but says that we are not to understand that David was buried in this part, but that these were in "the field of the burial of the kings" where Uzziah was buried. It has, however, been twice pointed out (1881, pp. 95, 327) that the Bible states that Uzziah was buried "in the City of David."

Therefore, while Captain Conder is both forced to allow, as the consequence of his own statements, that the City of David took in the three parts, A, B, and the Upper City, and while he maintains that the field of the burial of the kings was in A—*i.e.*, that there were old Jewish tombs in A—he still most inconsistently and strangely (without excavating all over *the three*, or even taking a peep at the tombs in A, whose former existence has been acknowledged) propounds as a *fact* the impossible theory that the Tomb of Nicodemus is the Tomb of David.

Webster states that some *facts* are *false*. Surely this must be one.

The evidence that Zion, the City of David, was solely and entirely on Ophel (so called) seems to me simply irresistible.

In Nehemiah we have (1) David's sepulchres; (2) David's house, and (3, 4) the stairs of the City of David (iii, 15; xii, 37) all placed on Ophel. Those who reject this position either ignore iii, 16, or contradict themselves.

In 2 Chronicles xxxiii, 14, we have (5) the City of David placed on Ophel, because a wall on the west side of Gihon (*i.e.*, Virgin's Fountain) in the valley (*nachal*, *i.e.*, the Kidron ravine) is described as outside the City of David. This would be absurd if the latter did not stand on Ophel.

In 2 Chronicles xxxii, 30, the water from Gihon being carried through the hill to Ain Silwân, is said to be brought straight down to the west side of the City of David; this (6) places the latter on Ophel. The words, however, may perhaps admit of being translated *westwards* to the City of David, as if the Upper City were intended. Since, however, the Valley of Hinnom was on the south side of the Jebusite (*i.e.*, of the Castle of Zion), and this valley has been proved to be that reaching from the Jaffa Gate by Robinson's Arch to Siloam, it is quite impossible for the Upper City to have been the *Castle* or City of David, as the Valley of Hinnom would thus be on its *north* and not on its south side (1882, p. 55).

In Psalm xlviii, 2, as expounded by the Rabbis (whom Lightfoot curiously misunderstands), *Mount Zion* (*i.e.*, the Temple, as in 1 Macc.) is described as on the *north* side of the city of the great king, *i.e.*, the City of David. This passage (7) places it on Ophel. A single direct statement in the Bible would be quite enough to settle the position of the City of David. We have, however, not merely *one* but *seven*, all consistent with one another, and *five* of them applicable only to a position on Ophel so called. Further, 1 Macc. distinctly means by Mount Zion the Temple on the eastern hill, and places Acra, or the City of David, near it, but at a lower elevation, which suits Ophel (so called) exactly; and here alone, as we see, Josephus puts his Acra.

Unfortunately this inaccurate writer has been too implicitly trusted, and due regard has not been paid to one important point, viz., that while in the historical parts of the Bible Zion means only the City of David, it may also mean in other parts either the Temple (*i.e.*, the Mount of Zion of 1 Macc.) or even Jerusalem in general. In deference to Josephus, the City of David has by some been taken to mean Jerusalem as a whole; while the Bible is most precise in its use of these terms, showing thereby that they are not convertible. For instance, more than twenty times it is said of one or another king that he *reigned in Jerusalem*, but was *buried in the City of David*.

Controversy about the position of this famous spot is now as good as dead. The site on Ophel will of course by some be contradicted, but he must be rash indeed who ventures to give his reasons for rejecting it.

As it has long been admitted that four statements in Nehemiah certainly seem to place the City of David on Ophel, no apology appears to be needed for maintaining with the utmost possible confidence that the correct site is that which the Bible itself points out.

Two deeply interesting questions remain—(1) Why was the castle of Zion built on the lowest hill at Jerusalem? and (2) In what precise spot are we to excavate in search of the Sepulchres of David?

W. F. BIRCH.

THE ENTRANCE TO THE TOMB OF DAVID.

THE Sepulchres of David are mentioned in Nehemiah iii, 16, in such a manner that in *Quarterly Statement*, 1877, p. 199, it seemed to me certain that they were excavated on Ophel (so called). I have never since that time doubted this point.

It was desirable, however, to point out their probable position on that hill, and this was a difficult question, as it depended upon the position of the *Pool of Siloah*, and the pool that was made, between which two Nehemiah iii, 16, obviously places them.

In *Quarterly Statement*, 1877, p. 202, I gave the reasons which seemed to compel me to identify these two pools with the two Pools of Siloam of the present day. This conclusion required me to place the Sepulchres of David on the southern extremity of Ophel. I afterwards (1879, p. 178) *distinctly abandoned* this position for the following reason. Accidentally it became clear to me that the City of David was solely and entirely on Ophel and that for Isaiah viii, 6, to have any meaning the waters of Shiloah (1878, p. 188) must have had to do with the Virgin's Fount. As, however, I rightly failed to see that the rock-cut tunnel to 'Ain Silwân existed in the time of Ahaz, it seemed impossible to apply to the same locality *all* the various passages where Shiloah, Siloah, and Siloam occur in the Bible and Josephus. In pardonable ignorance of the true explanation (*supra* 106), I was forced to disunite these names, and *assumed* a position for the Pool of Shiloah a little south of Robinson's Arch, and to avoid some difficulties, which need not now be specified, I placed *the pool that was made* at the present upper Pool of Siloam. On the further *assumption* that the Sepulchres of David were in the *malaki*, it was shown on a plan (1881, p. 99) where they ought to be looked for.

The true solution of the Siloam difficulty at once upset this my *second* position. Baffled, but not disheartened, I have at once to begin afresh. Experience and time have, however, taught me something. One may be certain now that 'Ain Silwân very fairly represents the position of Siloah; the city of David was on Ophel; the watergate (Neh. iii, 26) need not have been near the Virgin's Fountain; while either here or more to the south on Ophel, but certainly not at the lower Pool of Siloam, we *must* fix "the pool that was made." The King's pool was, in all probability, the present lower Pool of Siloam. I venture now on a *third* site for the entrance to the Tomb of David. It seems to me to be within an area 450 feet long, by 50 broad, one longer side coinciding with the track along the ridge of Ophel, and its breadth reaching about 40 feet down its eastern side. The southern end of the area is about halfway between the Virgin's Fountain and 'Ain Silwân. Good reasons for this position I hope to give in the next number.

W. F. BIRCH.

THE NAMELESS CITY, AND SAUL'S JOURNEY TO AND FROM IT.

I SCARCELY like to intrude into the discussion of a matter confessedly so perplexing, but knowing how much the Rev. W. F. Birch values the *expression* of different views, I do venture to ask his consideration of the following points, which have suggested themselves to me in studying his paper on "The Nameless City" in the January *Quarterly Statement*. I must ask him and you to pardon me if, from any want of knowledge of what the learned have written on this subject, I seem to be endeavouring to bring to life the "thrice slain."

In regard to Saul's journey, his starting-point is not mentioned in the narrative, but we are told that having "passed through" the hill-country (*Mount, A.V.*) of Ephraim, the land of Shalisha, the land of Shalim, and the land of the Benjamites, they then "came to" the land of Zuph. It was when they thus "came to" it, contrasted with the expression used before, that they had "passed through" the land of Shalisha, &c., that the Nameless City was near.

Does not this show that the city, if it was *in* the land of Zuph, was only just over the border?

Surely, too, 1 Sam. ix, 4, shows that the "land of Zuph" was not *in* the "land of the Benjamites," which they had "passed through," and if we may take the "land of Benjamin" as equivalent to the "land of the Benjamites," then verse 16 shows that the *city* was not *in* the "land of the Benjamites" or of Benjamin, for the Lord had told Samuel that he would send him a man "*out of the land of Benjamin.*"

May not this verse simply mean (taken in connection with the route named in verse 4) that the "land of Benjamin" was the last district Saul had passed through, and not necessarily that it was that whence he originally started?

In regard to his journey after leaving Samuel, does not chapter x, 13, 14, show that the *Gibeah* (the high place) to which he came, called in verse 5, A.V., the "*Hill of God,*" was *not* the place whence he started, seeing that in verse 14, and again in verses 15, 16, Saul's uncle is prominently referred to, but there is no mention made of his father? Might not the absence of all mention of his father indicate that Saul did not then return to his father's city? or must we suppose that verse 14, &c., refer to his visit to Gilgal, as commanded in verse 8, and that this was subsequent to his return home?

Is it possible that the Gilgal of verse 8 was the same as the Mizpeh of verse 17, &c., where Saul was chosen by lot? (See also chapter xi, 14.)

As to Saul's *destination*, chapter x, 26, tells us that "Saul *went home* to Gibeah." Are we not justified, then, in considering *this* to have been his *father's city*, whence he started to seek the asses, and the same place to which chapter xi, 4, says the messengers from Jabesh Gilcad came to Saul after he had been chosen king?

Why does Mr. Birch prefer the *Beit Jâla* hill to Beit Sahur, which Mr. Trelawney Saunders gives in the Old Testament Map as the position of Ramah and Ramathaim-zophim?

In 1 Sam. i, 1, the *same name* is given to the country with which Ramathaim-zophim is in some way connected, as that of the first region Saul and his servant searched for the lost asses. Would Mr. Birch suppose the reading in verse 4 of chapter ix to be an error also?

Whatever may be the precise meaning of the whole of verse 1 of chapter i, verse 19 shows that Elkanah was living at Ramah before the birth of Samuel, while verses 21, 22, and verse 11 of chapter ii, show, I think, that the infancy of Samuel was certainly passed at Ramah; consequently No. 2 of Mr. Birch's "explanations" on page 52 cannot hold good.

The whole difficulty seems to arise out of chapter x, 2.

I should, therefore, like to ask Mr. Birch's opinion of the admissibility of the reading which Mr. Shapira, in the "Athenæum" of August 5th, 1882, says is that found in an Arabic Commentary of which he is there treating.

Mr. Shapira gives it thus (I add the opening clause): "When thou art departed from me, to-day thou shalt find 'at Zelzah, in the border of Benjamin, two men *from* Rachel's sepulchre,'" &c.

Taking this reading, might not the easiest mode of reconciling *all* points be to suppose that "the Nameless City" of chapter ix = Ramah of chapter i, 19, and chapter ii, 11 = Ramathaim-zophim of chapter i, 1, while situated *near* the land of Zuph, was yet in the hill country of Ephraim, and, in fact, was the Ramah mentioned in Judges iv, 5, 6, comparing especially with this passage 1 Sam. x, 3, where both Bethel and Tabor are mentioned?

I have not had time to work out Saul's home route in accordance with this supposition, but I should like to know from Mr. Birch if there is any insuperable objection to it.

H. B. S. W.

IN regard to the points raised by H. B. S. W. I would observe—

(1) That it seems to me that the city was certainly in the land of Zuph, and (whether in or outside Benjamin) close to the border.

(2) I am not sure that 1 Sam. ix, 4, proves that the land of Zuph was not in the land of Benjamin, nor am I sure that ix, 16, makes it certain that the city was outside Benjamin. This point raised by H. B. S. W. is important. I have not seen it anywhere argued out, but if it can be satisfactorily made out, it will be a clear gain to have it established that the city was outside the tribe of Benjamin.

We have a similar difficulty in regard to the Cave of Adullam. David's parents dwelt with the King of Moab all the while that David (1 Sam. xxii, 4) was in the *hold*. There would have been no need for their doing so, if the hold had been in Moab. Therefore we conclude it was not in

that country, but identical with the *hold* named in connection with the Cave of Adullam (2 Sam. xxiii, 14).

If this cave was either near the city of Adullam (Josephus, 6 "Ant.," xii, 3, but not 7, xii, 4; 7, iv, 1), or in Wâdy Khureitun (as tradition seems to me rightly to maintain), then the *hold* was certainly within the tribe of Judah. But if to David (1 Sam. xxii, 5), while he was (strictly speaking) in the land of Judah, it could be said, "Abide not in the hold; depart, and get thee into the land of Judah," there is no reason why to Samuel, living at Ramah in the land of Benjamin, it might not also be said, "I will send thee a man out of the land of Benjamin." If this argument is deceptive, perhaps the fallacy will be pointed out.

It seems, however, to me that (a) it is quite possible that, if Ramah was on the border of Benjamin, but still within it, a person might be said to have gone through the land of Benjamin when he got close to it; and that (b) with Ramah so placed within Benjamin, a person might still be said to be sent to Ramah from the land of Benjamin; and (c) that as the boundaries of the tribes were not always strictly observed (Joseph or Ephraim seized Bethel, which was really in Benjamin, Judges i, 22; Josh. xviii, 22; 1 Chron. vii, 28), it is quite possible that Ramah was, strictly speaking, in the territory originally allotted to Benjamin, and yet had become alienated to the Kohathite Levites or to Judah. On this point I wish to keep an open mind, and when it is made out I shall cheerfully give up Beit Jâla as Ramah, since the position of Rachel's Sepulchre seems to me certain; and with this point fixed, the waters of Nephtoah must be the springs near Solomon's Pools; and after this I do not see how originally Beit Jâla can have escaped being in Benjamin, if the boundary is drawn in a reasonable manner. Further, against this view it is a common thing in Hebrew for the narrative to go back (Judges xx, 35, 36; 1 Sam. xx, 22), so that 1 Sam. ix, 5, may relate what happened in the land of Zuph, even while this was the very part where they finished going through the land of Benjamin.

(3) I think Saul started from Gibeah, but I do not see that the precise point of departure affects the position of the other places. Kish, who seems at this time to have been rather nervous (ix, 5; x, 2), might easily be lost sight of behind Abner, like Bethuel behind Laban (Gen. xxiv, 29, 50), though the cases are not quite parallel.

(6) I think Saul's care for his father would make him go home at once.

(7) Hardly. "Go *down* to Gilgal" (x, 8), and the position of Mizpah at Neby Samwîl seem to forbid the identity of the two.

(8) I believe Saul's destination was Gibeah (of Saul), within a mile of Kh. Adasah, east of Gibeon.

(9) I object to Beit Sahur as being Ramah because, first, Mr. Saunders' route, drawn through the desert from Jericho, is *all but entirely through Judah*, and not Benjamin (1 Sam. ix, 4); and next, if Mr. Saunders chose to change the route to one from the west, then 1 Sam. ix, 5, &c., does not seem to me to allow of Saul having passed (close to) Bethlehem, which he must have done to get to Beit Sahur.

(10) No.

(11) I do not see that the objection is sound. Elkanah certainly lived at a Ramah (1 Sam. i, 19), called Ramathaim-zophim in 1 Sam. i, 1; and next, Samuel (as it seems clear to me) met Saul at a Ramah, which was not in Mount *Ephraim*, but south of Jerusalem. If Mount *Ephraim* is still to stand in 1 Sam. i, 1, then it seems to me explanation (2) is possible, though I reject it, because moving from one Ramah to another seems far more improbable than a slight alteration of the text.

(12) Mr. Shapira's reading no more commends itself to me than his pottery. "Rachel's Sepulchre" does not seem to me a likely name for a village.

(13) The proposal to identify Samuel's Ramah with the Ramah of Judges iv, 5, seems to me open to grave objections. Ramah (Judges iv, 5) is commonly taken to be Er Ram, and rightly so, I think. 2 Sam. xx, 1, 21, shows that part of Mount Ephraim was in Benjamin. It seems unnecessary, therefore, to look for another Ramah besides Er Ram near Bethel. With Er Ram (in *Benjamin*) for Samuel's Ramah, the objection about the city not being in Benjamin directly clashes, and he must abandon one of his two proposals. The *real* objection, however, is that Saul did not know Samuel by sight, while Er Ram is certainly within three miles of any possible position of Gibeah of Saul (his home).

May 22nd, 1883.

W. F. BIRCH.

P.S.—If there had been a high hill between Bethlehem and Solomon's Pools, and near it old tombs, and a well or cistern in the valley on the west side, then I should have preferred this position to Beit Jâla, and H. B. S. W.'s point would be satisfied.

WELSH CROMLECHS NEAR BARMOUTH.

ALLOW me to give a brief account of some cromlechs near here. They are at "Dyffryn" ("valley," or "plain"). They stand on the slope of a hill on the right of the road from Barmouth. This hill slopes towards the sea, and south-west. The hill is uncultivated—a waste covered with scanty gorse bushes and brambles; a small but strong spring runs down the slope, and near the cromlechs. There are two, one larger than the other common to both, a large flat stone is supported on several upright stones; these last are mere wedges, or slabs of unequal shape. The flat stone which rests on them is much thicker. I could see no tool marks anywhere; the strata of the rock showed all over; it would be easy to pass under the large upper stone and the lower floor. The floor had in the centre a small flat slab, laid level, though the upper slab of the smaller cromlech sloped to the south-west, and the upper slab of the larger one sloped to the north-east. Near these cromlechs are circles of rude stones, piled in heaps; their number and

their order (extending up the hill and round the cromlechs) show that the arrangement was not accidental. Some short distance away, on higher ground, in a rude road or trackway, is shown a flat stone, on which there is a supposed footprint, called *Llan Maria* ("Mary's Step, or Stride"). The impression is about natural size. The tradition is that "Mary" put her foot on this rock, and then strode to the lower hill, a hill lying below, called *Bwlch Gau* ("the false hill"), which is covered with roots of oak trees. Remains of an old "altar" are said to have existed here quite recently, but are now removed. A trackway leading to this hill is called *Iwylfa 'R-Llwyn* ("the Grove Lane").

More than a mile away is a cromlech, dalled *Coetan Arthur* ("Arthur's Quoit"), the tradition being that this was a stone "Arthur" threw. On this stone are the reputed marks of "Arthur's" fingers.

Cromlechs and stone circles abound at this place ; on the hills are found *Maen-Hias* (*maen*, "stone ;" *hîa*, "long" or "erect"). Lower down, and near a village, there are two maenhirs, one a very fine one ; the tradition is that the smaller goes round the larger when it hears the church bell.

I was much struck by the walls dividing the fields on the hills near the cromlechs and footprint. The enclosures are much smaller than the usual Welsh fields ; the coast-line, with its sandhills, its plain, and then the deep blue sea, bright blue sky, and sunshine above me, so brought back to my mind the coast-line from Jaffa to Acre, that the thought occurred to me that these cromlechs, stone circles, and walls were the efforts of a people, immigrants from that Eastern land, trying to reproduce in the land of their adoption the aspects of the old home.

To sum up, we have, first, cromlechs so resembling those of Moab, that the published plate of that one at 'Amman would pass for a fair representation of those at Dyffryn. Secondly, the circles of rude stones piled in heaps. Thirdly, the footprint on the rock, and that, like the Eastern legend, a FEMALE foot. Fourthly, the finger-print—"Arthur's Fingers,"—the MALE hand ; Eastern legend again. Then the spring of water, the curious name for the hill, and the lane !

The cromlechs and maenhirs found in such numbers in Moab, in upper Galilee—in mountain regions only—so strongly resemble the Welsh ones that they point, I think, to a common origin. Call the race what you will—Hittite or Phœnician—at any rate it was an Eastern race, and a race of mountaineers.

HENRY A. HARPER.

THE JERUSALEM YEAR BOOK.

THE first number of a Jerusalem Year Book has been issued by the Rabbi A. M. Luncz for the year 1882, and is intended to be continued if sufficient support can be obtained. The work is half in Hebrew, half in English.

The latter part contains an amount of statistics and general information which will be found most valuable. The following notes are taken from its pages.

The Market Days in the towns of Palestine are as follows:—

Jenin, every Tuesday.

Gaza, every Friday.

Hebron, every Friday.

Jaffa, every Friday.

Jerusalem, every Friday. (Cattle market, to which from 40 to 80 oxen and cows are brought for sale.)

Lydda, every Monday. (Cattle market, to which, besides oxen and sheep, horses, asses, camels, and mules, are also brought for sale. About 200 head of cattle come to market.)

Ramleh, every Wednesday. Only cattle market.

Suk Elihun, every Monday. All sorts of animals, of which there are sometimes 2,000 head, are sold here. Other goods—for instance, Bedouin clothing, &c.—are also brought for sale. This market day is the most important one in the country.

Safed, every Friday. Only grain sold. (This market day is already mentioned in an account of a journey made in the year 5282 (1522). This account is printed at the end of the book “Shabche Jerusalem”).

Weights and Measures:—

1 rottle = 12 ukieh.

1 ukieh¹) = 75 dirhem (drachms).

There is no smaller denomination of weight; the ukieh, however, is divided into $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, &c.

1 jarra, used for measuring olive- and Sesame-oil, contains, if used for measuring olive-oil, 81 ukiehs, and if for Sesame-oil, 65 ukiehs.

1 timniyeh or tubbeh, about 8 rottle, used for measuring corn.

1 kantar = 100 rottles. With the exception of the two last denominations (jarra and timneh) those given above are used as weights.

In the villages grain is also sold by the saah = $\frac{1}{4}$ timneh, and the midd = 4 timneh.

The coinage used are the piastre and its fractions; the beshlik = 5 piastres, the wuzari = 3 piastres, the altilik = 6 piastres, and the medjidie = 20 piastres. As 110 piastres are equivalent to 1*l.* sterling, the piastre is worth 2*d.*

The city contains, besides three hotels, many hospices for pilgrims. The Casa Nuova offers lodging for one month. The Austrian Hospice, and that of the Knights of St. John, receive pilgrims, and give them board and lodging for thirty days. The Armenian Convent, the Greek Convent, and the Coptic Khan limit their hospitality to fifteen days. For Jews there

¹ = about 250 grammes.

are pilgrim houses for natives of Austria, Holland, and Germany, together with "houses for strangers," in the Jewish quarter. The different churches are represented by an Armenian, a Greek, and a Latin Patriarch ; by a Coptic and a Syrian Bishop ; by a Russian Archimandrite ; by a Jewish "Chacham Baschi ;" and by a Mohammedan Cadi. The Jews, who are divided into Sephardim, Ashkenazim - Peruschim, Hassidim, and Moghrabim, have four synagogues for the first sect, one for the second, one for the third, and five for the fourth. They have also sixty "houses of prayer and study," most of them called "Colleges," or else bearing poetical titles, such as "Fear of Isaac," "Grace of the Lord," "Glory of the Humble," "Tent of Moses," "Comfort of Zion," the "Crown of Fame," and so on.

There are twenty-one societies for religious purposes among the Jews. One of these is for preserving the books in the Colleges, another for the promotion of kindness and truth, and another (the number of its members is not given) consists of "those who are free from worldly affairs." Next there are the Jewish charitable societies and seven industrial societies—two near Jaffa, and the rest in or near Jerusalem.

As regards the sects, the Sephardim speak a language of which the basis is Spanish : it is called "Ladino ;" the Moghrabim, a language whose basis is Arabic ; and the Sephardim, a mixture of Hebrew and German called "Yiddish." A very minute account is given of the Jews in Jerusalem : their occupations, the distribution of the "Haluka," or alms collected in the synagogues all over the world, their schools and colleges, the society called the Mikveh Israel. It is to be hoped that the next year's volume will contain statistics, as careful and exact, of the Mohammedan and Christian communities. The number of pilgrims in the year 1880 was 6,753, of whom 1,510 were Russians, 1,618 Greeks, 1,271 Armenians, 93 Syrians, 430 Jews, and the rest Protestants and Catholics, and, as nearly as can be made out, about 800 of the former to 1,000 of the latter.

The "Year Book" is recommended to those who take an interest in the affairs of modern Jerusalem. It must, however, be pointed out that it is at present too exclusively Jewish. The Hebrew portion of the work contains a paper on modern Jewish towns in Palestine, to which we shall perhaps refer in the next number.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

THE organisation of the Geological Expedition, which was announced in July, has occupied the attention of the Committee during the summer. They have been so fortunate as to secure the services of Professor Hull, F.R.S., the Director of the Geological Survey of Ireland; he will be accompanied by his son, Dr. E. Gordon Hull, as Assistant Geologist, and Medical Officer to the party. Captain Kitchener, R.E., who is now in Egypt, has received permission to employ his leave in accompanying the party. Two volunteers, Mr. Henry Hart (who has received a grant from the Irish Academy for botanical research) and Mr. Reginald Lawrence, will also accompany Professor Hull.

As regards the route, the first part will be across the Sinai Desert from Suez to Akabah, whence they will travel north by the Wâdy Arabah, to the south end of the Dead Sea. The key to the geological problems of the whole country lies in this little-known region. The party will afterwards visit Moab, along the border of which country the Nubian sandstone comes to the surface. Opportunity will be, of course, taken by the officers to make notes as to the topographical features of the Wâdy Arabah, and to examine as much as possible into the various Biblical questions which belong to the district. A summary of these has been prepared for the party by Colonel Sir Charles Wilson.

It is calculated that the cost of the whole expedition, including that of publishing the results, will be under £2,000. Any who wish their subscriptions specially devoted to this work should state their desire to the Secretary. A form of subscription is enclosed.

The late Mrs. Anne Jay, of the Villa Bertolini, Lausanne, Switzerland, who died on June 10th last, has left a legacy of £2,000 to this Society. The bequest will not, however, be available in time for the new expedition.

The investigation into the Shapira manuscripts has created a great deal of interest during the last three months. A narrative of the affair, together with the letters and reports of M. Clermont Ganneau, Captain Conder, Dr. Neubauer, and Professor Sayce, with the report of Dr. Ginsburg to Dr. Bond, will be found in this number.

A paper has been contributed by M. Clermont-Ganneau, to the "Revue Critique," on the names of the personages associated in early mediæval art with the Crucifixion. "St. Longinus," the soldier with the spear, got his name, M. Ganneau shows, from the spear itself, λόγχη. The penitent thief, St. Dysmas, may be, he thinks, a corruption of εἰς τὰς δυσμὰς—i.e., the west—derived from the representations of the sun and moon found in primitive pictures of the Crucifixion. The name of the impenitent thief—Gestas—is possibly the remaining εἰς τὰς. The soldier who bore the sponge is sometimes called Stephaton, which, M. Ganneau thinks, is derived from a misreading of the word σπύγγον.

The September number of the "Contemporary Review" contains a remarkable paper by Professor Sayce on the Gods of Canaan.

Canon Tristram's volume on the "Flora and Fauna of Western Palestine" is rapidly advancing. The author thinks there is no reason why the book should not be ready before the end of the year. The illustrations are ready: they comprise six plates of mammals, seven of birds, twelve of fishes and reptiles, and one of gastropods.

As regards the Jerusalem volume, that, it is hoped, will also be ready about the same time. The drawings are nearly all completed with the exception of those to illustrate M. Clermont Ganneau's work.

Captain Conder's "Heth and Moab," being a popular account of his recent campaign and discoveries, will be ready this month (October). As in the case of "Tent-Work in Palestine," a considerable reduction in the price will be made or subscribers *only by application to the office in Adam Street*.

The only authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem.

- (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

The income of the Society, from June 25th to September 30th inclusive, amounted in all, including subscriptions, lectures, and payment for maps, memoirs, and publications, to £576 6s. 11d.

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

THE GEOLOGY OF PALESTINE.

(*The following summary of geological work hitherto accomplished in Palestine is abridged from Professor Huddleston's Address to the Geologists' Association, Vol. VIII, No. I.*)

As a direct result of the great Napoleonic wars, the commencement of the present century was not favourable to the investigation of distant countries, and the records of travel are consequently but few. It is, however, a fact that about this period certain parties in England formed a kind of association for the exploration of Palestine, and there is a tradition that agents were sent out, who failed, in the then disturbed state of affairs, to reach the Holy Land.

Shortly after the conclusion of the general peace which resulted from the crowning victory of Waterloo, great efforts were made by most European States to extend geographical knowledge. In the direction of Arabia and Palestine our fellow-countrymen, Irby and Mangles, were not long in availing themselves of the recently acquired opportunity, and about the same date Burkhardt commenced his classical researches. Soon afterwards there was a renewal in England of the attempts to form an association for the exploration of Palestine, but somehow the attempt fell through, although a certain amount of money was collected for the purpose. The balance of this fund, amounting to upwards of £130, was handed over to the Royal Geographical Society in 1834.¹

The decade from 1830 to 1840 may be said to have witnessed the first serious attempts to describe the *geology* of Palestine and the neighbouring countries. The oldest of these really geological works is that by Botta, entitled "Observations on Lebanon and anti-Lebanon," published in the *Memoirs of the Geological Society of France*,² 1833.

The year 1837 was rendered memorable for the important discoveries then made. Dr. Roth, a Bavarian, brought from Judæa a series of fossils, many of which have since been described by Dr. Fraas. But the great discovery of all was the recognition of the depression of the Dead Sea basin, a circumstance which had escaped the notice of Burkhardt and all the earlier travellers. It is difficult to believe, at this time of day, that not only were the writers of antiquity ignorant of this most important feature, but that even modern men of science, five-and-forty years ago, were equally in the dark on the subject. Several names are mentioned in connection with this discovery, and amongst others the names of two Englishmen, Messrs. Moore and Beck, who published an account in the "*Journal of the Royal Geogra-*

¹ It appears that the "Palestine Association" held a meeting on the 24th April, 1805; but that, in the interval from 1809 to 1834, no steps were taken by the Association. On the 28th January, 1834, a meeting was held, Mr. Bartle Frere being in the chair, when the sum of £135 9s. 8d., being the balance of the funds, was disposed of as stated in our text.

² 1st ser., vol. i, p. 135.

phical Society" for 1837. There was some difference in the earlier estimates of the amount of depression; but, to anticipate, I may say that the figure fixed upon by the surveyors of the Palestine Exploration Fund is 1,292 feet below the level of the Mediterranean.

The Biblical Researches of Dr. Robinson, an American clergyman of great learning, published about this period, contain much valuable physical information, which was materially supplemented by a posthumous work, entitled "Physical Geography of the Holy Land." Russegger, an Austrian mining engineer in the employment of Mehemet Ali, travelled in Egypt and Nubia, and subsequently in Sinai, Palestine, and the Lebanon, though his principal work was not published till some time afterwards.

1840-1850. Stimulated by the remarkable discoveries which had been recently made, and encouraged, perhaps, by the success of their learned fellow-countryman, Dr. Robinson, the Americans seemed to have taken up the subject of the geology and physical geography of Palestine with much zeal. In 1843 appeared an important paper by Hitchcock,¹ who, although personally unacquainted with the country, put together the notes and examined the specimens forwarded by certain American missionaries with such sagacity that, as M. Lartet cynically remarks, he was able to give a better account of its structure than the majority of Eastern travellers, whether before or since that time.

Undoubtedly the most remarkable effort of this decade was the celebrated United States Exploring Expedition under Lieutenant Lynch.² In April, 1848, the party descended the Jordan in boats from the Lake of Tiberias to the Dead Sea, and to them we owe the first thoroughly reliable information respecting these two sheets of water and the river which connects them. So tortuous is the bed of the Jordan that, within the space of 65 miles, the river was found to traverse a distance of at least 200 miles. Considerable difficulties were experienced from shallows and rapids, but these were finally surmounted, and the two metal boats which contained the party entered the Dead Sea on the 18th April. This was probably the first time that the Jordan had been navigated the entire distance between the two lakes.³ Under the superintendence of Dr. Anderson a large collection of fossils was made during this expedition, chiefly from the Lebanon, and from certain localities in Western Palestine. Many of these were subsequently described and figured by Conrad in the official report.

With this expedition all doubts as to the true physical structure of the great *fissure*, known as the Ghor, extending from the hollow of Syria to the Red Sea, were terminated. The weird and unwholesome nature of the place, and the strange traditions with which it was associated, had

¹ "Assoc. of American Geologists," p. 369, Boston, 1843.

² The official report was published at Baltimore in 1852.

³ The banks of the river at the termination of its course were found to consist of red clay and mud; soundings gave a depth of 7 feet, with muddy bottom; width of river 80 yards; current three knots per hour. At the actual embouchure the river was found to be 180 yards wide and 3 feet deep.

long enveloped the *Lacus asphaltitis* in a haze of mystery akin to the fogs which a copious evaporation sometimes causes to hang over its waters. Opinions might be divided, as they still are, on the causes which have produced this remarkable fissure, but the leading facts of its physical structure had at length been obtained, and thus the way was paved for the study of its geology.

The decade extending from 1850 to 1860 does not appear to have been marked by any great expedition having reference to those subjects, but the succeeding ten years were very fruitful in discovery, and the investigations of that period may be said to have formed the staple of our information up to the present day. The most important works are "Aus dem Orient," by Dr. Fraas, of Stuttgart, published in 1867, and M. Louis Lartet's essay on "The Geology of Palestine," published in 1869.¹ It is from these two works, but more especially from the latter, that this communication has, in the main, been compiled.

M. Lartet accompanied the Duc de Luynes in his expedition to Palestine during the spring and early summer of 1864. Lieutenant Vignes assisted in the navigation on the Dead Sea, and published a narrative of the journey conformably to the instructions of the Duke himself. The party having made a short excursion into the Lebanon, passed by way of Galilee and Samaria to Jerusalem, whence they proceeded to embark on the Dead Sea in the iron vessel "Ségor." A thorough examination of the Dead Sea and its shores was the result, thus supplementing the observations made by Lynch's party sixteen years previously. Precautions were especially taken for obtaining specimens of the water for analysis from various depths by means of an apparatus which is described and figured in Lartet's work. These results were of great value. After spending a month on the Dead Sea, the party ascended the right bank of the Jordan, about half-way to the Lake of Tiberias, and thence returned by the left bank; thence to the mountains of Ammon and Moab, which they were the first to examine scientifically.

A second visit from Jerusalem was made to the Dead Sea by way of the mountains of Judæa, and thence along the Arabah to the watershed, the altitude of which was determined barometrically by M. Vignes. The hollow south of this watershed, or ledge, usually known as the Wady Akabah, was found to be little else than a desert of sand, sometimes in motion, sometimes cemented by saline incrustations. The rocks of the Mount Seir range presented opportunities for studying the granites, &c., so extensively developed in Sinai and Egypt, but which are wanting in Palestine. Having reached the Gulf of Akabah, they returned north by way of Mount Hor and Petra, and then, crossing the Arabah obliquely, passed over the calcareous plateaux which form the continuation of the desert of the Tîh to the south of the mountains of Judæa. A second

¹ As M. Lartet's voyage was made in 1864, there are numerous notices by this author previous to 1869. See "Bull. Soc. Géol. de France," 2nd ser., vol. xxii, p. 420 (1865); *id.*, p. 537; *id.*, p. 719; *op. cit.*, vol. xxiv, p. 12 (1866).

expedition was made into the trans-Jordan district, attended with much success in the discovery of cretaceous fossils. Finally, having traversed the basaltic flows of the Jaulan (*Gaulanitis*), the sources of the Jordan itself were inspected, and especially the Hasbâny, its longest, if not its most copious, branch.

I have been thus particular in describing the route of M. Lartet from February to June, because his journey has been more productive of geological information than any other as yet undertaken. Nevertheless, our own fellow-countrymen were not idle at that period, as the notices of Messrs. Duncan, Carter, and Holland, in the "Quarterly Journal of the Geological Society," and in other publications, will show. In 1868 Mr. Bauerman also contributed a valuable paper entitled "A Geological Reconnaissance from Suez to Wâdy Feiran,"¹ and about six years afterwards Mr. Milne, another student of the School of Mines, published some important "Notes on the Sinaitic Peninsula and North-West Arabia."²

In the *Quarterly Statement* of the Palestine Exploration Fund for 1869 it is observed with regard to geology—"Of this we are in ignorance in almost every detail. The valley of the Jordan and basin of the Dead Sea is one of the most remarkable on the earth's surface." As observed by Murchison, "It is the key to the geology of the whole district." Hitherto no great amount of geological matter has been published in the pages of the *Quarterly Statement*, although the other subjects have, for the most part, received ample illustration. Yet some of the papers by Captain Conder show that the subject of geology, and especially the question of the age and nature of the deposits of the Jordan valley, have possessed considerable attraction for him. Captain Conder's "Physical Description of the Holy Land,"³ and his chapter on the "Jordan Valley,"⁴ should be read diligently by every one who desires to become acquainted with the geology of Palestine. The 1-inch Map of Western Palestine was published by the Committee of the Exploration Fund in 1880, and they have also issued a very useful reduction, together with sections drawn to scale.

The peninsula of Sinai was surveyed by a party of Royal Engineers, under Captains Wilson and Palmer, assisted by Mr. Holland, about the year 1869, and the model of Mount Sinai now at the Indian Museum was executed about the same time.

Though scarcely geological, the admirable volume of the late Dean Stanley, and the adventurous narratives of Canon Tristram, contain much geognostic information, and as they are well illustrated and ably and pleasantly written, these works have always been in great favour with the English public.

Finally, the two greatest authorities on the geology of Palestine have within the last few years published the results of their latest information.

¹ "Quar. Journ. Geol. Soc.," vol. xxv, p. 17, *et seq.*

² *Ibid.*, vol. xxxi, p. 1, *et seq.*

³ "Handbook to the Bible," p. 205, *et seq.* (Longmans, 1880.)

⁴ "Tent-Work in Palestine," p. 214. (Bentley, 1880.)

In 1877 M. Lartet summarised his knowledge in a magnificent quarto volume, well illustrated with maps, sections, and plates of fossils, entitled "La Mer Morte," and in the following year Dr. Fraas brought out the second part of "Aus dem Orient" in the shape of a "Geological Treatise on the Lebanon."

Many valuable notices, in addition to those already mentioned, are scattered up and down in the Proceedings of Societies throughout Europe and America.

HEBREW INSCRIPTIONS.

CONSIDERING how scanty the ancient Hebrew and Aramaic texts whence we may draw definite ideas of the growth of the Hebrew alphabet still are, it will perhaps be interesting to note the result of the exploration of Palestine in this respect. In 1864, Madden could only compare the Hebrew of the coins with the coffin of Eshmunazar (which dates 500–400 B.C.), the Assyrian lion-weights (750 B.C.), and the Carpentras stone and Ptolemaic papyri (300–200 B.C.); all his other alphabets are later than the Christian era—including the Palmyrene texts (second century A.D.), the Samaritan text (527 A.D.), the Bowls found at Babylon (fifth and seventh centuries A.D.), and the Stones from Aden (717 A.D. and 916 A.D.).

In addition to these texts, and to the Phœnician inscriptions of Marseilles, Malta, Cyprus, and Athens, together with the Jewish coins of the Hasmonean age, we now have the Moabite Stone (876 B.C.), and the Siloam inscription (perhaps 732 B.C.), all of which are in the ancient character called "broken" in the Talmud (Tal. Jer Megilla, i, 11), and said by Rashi to be called *Libonai*, because it was used by the inhabitants of Lebanon—that is to say, by the Phœnicians. The object of the present note is to gather together the instances which show the early existence of the square character in Palestine itself; for of the texts given by Madden, the earliest approach to the square character is found on papyri, and on a monument of Egyptian origin. The square characters are derived from the Aramaic or Syrian branch of the Phœnician alphabet, and not from that which gave birth to the Moabite, Siloam, and Hasmonean types.

Carrying our researches backwards, we must first recall the inscription at the Synagogue of Kefr Bir'im ("Memoirs," Vol. I, p. 233). It is in square Hebrew, and the character of the building agrees with Jewish tradition in attributing the erection of the doorway to about the year 130 A.D. The position of the text forbids us to suppose that it was executed later than the time of the erection of this synagogue. This was also the opinion of Dr. Robinson ("Lat. Bib. Res.," p. 70). It may thus safely be referred to the second century A.D. To the same date belongs

the similar square Hebrew text at the Synagogue of El Jish, and the illegible fragment from Nebratein.

The tomb of the Beni Hezir at Jerusalem presents us with another valuable text. In this case also the inscription can hardly be supposed to be later than the tomb, as it is quite inaccessible; and the tomb is most probably to be dated as earlier than the great siege (70 A.D.), since after that siege the Jews were excluded from Jerusalem down to the fourth century, whereas we know that the tomb in question was already in existence and supposed to be very ancient in 333 A.D. The Beni Hezir text is referred to about the Christian era by Du Vogüé; it should, however, be noted that the tomb within contains only *kokim*, which points to its being of considerable antiquity, and the Hasmonean period appears to be one during which many of the finest monuments round Jerusalem were constructed. The letters in this text, though nearly approaching square Hebrew, still retain traces of the older Aramaic forms, especially in the *Aleph* and the *Cheth*, while the *He* resembles that of the Carpentras stone, as do also the *Zain*, the *Yod*, the *Shin*. This text is the earliest and most important square text yet known in Palestine, and contains seventeen letters of the alphabet.

Another tomb near that of the Judges, north of Jerusalem, appears to belong to the same period, having an inscription in two lines, but giving no additional letters.

Jewish tombstones have been discovered in the Crimea with square characters, having the dates 702 and 726 of the Galuth (see "Transactions Soc. Bib. Arch.," Vol. III, p. 27). The Galuth of Jeconiah (Ezek, xxix, 17; xxx, 20) dates from 589 B.C., which would make these tombstones as early as 113 A.D. and 137 A.D.; a third dates from 785 of the Galuth, or 196 A.D. The genuineness of these tombstones is not disputed, but the era to which they have been ascribed by some writers seems to be too early, even if it be certain that the Jews were able to reckon the interval with exactitude, which is by no means the case with the later Jewish reckonings. The dates are, however, about the same as that of the Kefr Bir'im inscription. The Karaite era of the Galuth is generally identified with the captivity of the ten tribes in 696 B.C., because of an inscription which identifies the year 1700 of the Exile with 1316 of the Seleucid era, but this is not the Biblical date. It should be noted also that there is an era of Galuth on the coins generally identified with 139 B.C.

The sarcophagus of Queen Sara in the tombs of the Kings, discovered by De Saulcy, is attributable to the century after Christ, about 45 A.D. The letters are very rude, but the character closely approximates to the square type.

Beyond Jordan we have the inscription at 'Arâk el Emîr, which contains five letters of the alphabet. Of these three are of the old Phœnician forms, but two are quite distinct from any "broken" forms, and are clearly the *Daleth* and the *He*, or the *Resh* and the *He*, as on the Carpentras stone and the Papyri, but even closer than these, or than the Palmyrene, to the square forms.

In the course of the survey three tombs with Hebrew inscriptions were found, besides the Gezer stone, discovered by M. Clermont Ganneau. The first of these tombs was found by Mr. Tyrwhitt Drake at 'Ain Sinai. The text was very rude, but the letters are of the square form (see "Memoirs," Vol. II, p. 302), closely resembling those of the Beni Hezir tomb. The form of the *Aleph* in the word Eleazar is nearest to the Palmyrene. The tomb contained a *loculus*. According to my reading of the text it represents the words—

משה בר אלעזר בר . . . כהן . . .
 "Moses, son of Eleazar, son . . . priest . . ."

The forms of some of the letters are those which are found as early as 300 B.C. The letters omitted seem most probably to form the word Zechariah. This with the next two I have submitted to Dr. Isaac Taylor for an opinion. The Aramaic word *Bar* is used instead of the older Hebrew *Ben*, pointing to a date later than the Captivity.

Two other tombs were found, having inscriptions in the older character. The first text was copied by me at Umm ez Zeinât ("Memoirs," Vol. II, p. 71), the inscription having been discovered by Corporal Armstrong, R.E. The letters were large but very rudely scratched, and had once been coloured red. Twelve letters in all were found.

א ב ג ד ה ו ז ח ט י כ
 ל מ נ ס ע פ צ ק ר ש
 ת

This tomb belongs to a large group of *loculus* tombs with a few *kokim*, and from the arrangement of the *loculi* it might be supposed to date at least as early as 200 B.C. ; but, on the other hand, this part of Galilee had a thick Jewish population in the second century after Christ.

This inscription appears to me possibly to read—

אלעזר
 בר עז
 ריה

"Eleazar bar Azariah." The *Zain* would resemble that on the Has-monean coins. The character approaches the Israelite rather than the Aramean.

The third tomb found during the course of the survey is that near the site of Archelais, a Herodian city in the Jordan valley. The letters are more distinctly cut than in the preceding instance (see "Memoirs," Vol. II, p. 396), and are of the older forms. The *Shin*, the *Vau*, the *Koph*, the *Aleph*, are all very near to the character of the Siloam text ; but the tomb is only a grave sunk in the rock, and there is no indication of the exact date. Archelais was founded by Archelaus ("Ant.," XVII, xiii, 1 ;

XVIII, ii, 2) ; but an older town may perhaps have occupied the site, as in the case of Beth-Saida.¹

The indications as yet obtained show that the Aramean alphabet was used in Palestine in the time of Christ, and even 300 years before His birth, the shape of the letters being even more completely defined than in the Palmyrene ; and some of these forms seem to be used as early as 176 B.C., in conjunction with the older types of the Phœnician alphabet, as evidenced by the inscription of Hyrcanus at 'Arâk el Emîr.

On the other hand we have the older forms of the letters on the coins as late as the year 40 B.C., and even later if the conclusions of Madden and De Saulcy concerning certain coins be accepted. It is clear that the two alphabets occur in use, side by side before the Christian era, although the researches of Gesenius, Levy, Renan, Lenormant, Du Vogüé, Taylor, and others, show the gradual development of the square character from the older Aramaic and Phœnician forms. In Galilee, in the second century A.D., the square character was certainly in use, yet the Galilean tomb above noticed as having an inscription with the earlier forms, may possibly belong to the same period.

A curiously erroneous fashion of speaking of the characters used on the coins as "Samaritan" has survived, and leads to mistakes. Thus a correspondent to the *Athenæum* (4th August, 1883) contrasts the alphabet of the Siloam inscription with that of the "Samaritan" letters on the Jewish coins, and supposes two "broken" alphabets to have existed side by side in Palestine. The characters on the coins were called Samaritan originally at a time when the nearest known alphabet resembling them was the Samaritan. It is clear, however, that Jews would not use Samaritan letters if they could help it, and it would be quite as accurate to speak of the coins as Phœnician or Greek. A comparison of coins and Siloam characters shows that they are the same alphabet save for differences in the *Vau* and *Zain*, which are scarcely greater than the differences between these letters on different coins. Considering that the Siloam text belongs to the eighth century B.C., and that the coins are probably never older than the second century B.C., these minor differences are very natural.

In the Talmud (Tal. Bab. Sanhed., xxi, 22), the square character is attributed to Ezra, which is a view not confirmed as yet by the researches of scientific men. It is, however, quite clear that the square and the older forms were both in use when the tract Yadaim (iv, 4) was written, that is to say, in the second century A.D. ; the *Ashuri*, or square character, was then employed with the old Hebrew language by the priests, whereas the older alphabet and the Aramaic language were used by the *Hidiut*, or ignorant.

A passage in the New Testament (Matt. v, 18) appears to imply the existence of the square letters in the time of Christ, and it will be seen

¹ The graffite on osteophagi, and in the tombs of the Prophets at Jerusalem, are not noticed in the present paper, because there is reason to suppose that they are too late to be of much value, nor are the mediæval graffite at Neby Samwîl.

from what has been above stated that the results of scientific exploration confirm the accuracy of this deduction. It seems to be proved that the two alphabets existed side by side as early even as 300 B.C., which would agree with the arguments deduced from a consideration of certain clerical errors in the LXX version of the Pentateuch. The Ptolemaic papyri seem to show that the change may have occurred in consequence of the difference of material employed, the older forms being preserved in inscriptions on stone and on metal, while the greater facility given by the use of ink on parchment led to the divergence of the MS. forms from the monumental forms. A similar divergence is observable in the hieroglyphic and hieratic forms in Egypt, the first being the monumental, the other the literary character.

The history of the alphabet has been made so plain in Dr. Taylor's volumes, which I have just received, as to render a lengthy note unnecessary ; but at the same time the value of the three new inscriptions above noticed is rendered yet clearer by his masterly sketch of the Aramean alphabets.

Hebrew MSS. do not give us any assistance in the study of the present subject because of their late date. Various fragmentary MSS. in Russia are supposed to belong to the seventh, eighth, ninth, and tenth centuries, though in each case the real date may be 107 years later than that usually ascribed. It is doubtful, indeed, whether we possess any Hebrew MS. older than the tenth century. The date of the old roll at Shechem is unknown, but the character in which it is written cannot be supposed older than the sixth century A.D.

Considering how completely the two alphabets appear to overlap in Palestine, even in monumental inscriptions, and also how great length of time would be required for the development of the square forms from the older ones, it is perhaps not impossible that the Talmudic tradition, accepted by Origen and Jerome, may have been in the main correct, and that the square letters, or forms approaching to them, may have been used in MS. writing even as early as the time of Ezra.

These remarks are offered with great diffidence, as the progress of archæology in this direction has been very rapid of late. A further note on the subject by Dr. Isaac Taylor, or Dr. Ginsburg, or M. Clermont Ganneau, would be of great value to future explorers, as enabling them to separate the true from the false, and indicating the sort of information which is required by the learned. The inscriptions of which no *fac-similes* have been given in this paper will be found represented in the "Memoirs" as noted.

C. R. C.

THE FORTRESS OF CANAAN.

"IN the first year of King Seti there took place by the strong arm of Pharaoh, the annihilation of the hostile Shasu from the fortress of Khetam, of the land of Zalu, as far as Kanaan. The king was against them like a fierce lion. They were turned into a heap of corpses in their hill country: they lay there in their blood; not one escaped to tell of his strength to the distant nations."

This fortress attacked by Seti I, in 1366 B.C., before the Exodus according to Brugsch, but perhaps during the time of the early Judges, is called in the great Harris Papyrus (of the time of Rameses III) a stronghold of the land of Zahi. It belonged to the Shasu or Bedawin, and had a stream and pool near it. The road by which Seti advanced led by Ribatha, which Brugsch believes to be Rehoboth, also in the land of Zahi, which he identifies with the Negeb or south country of Scripture. In 1700 B.C., we find an earlier king attacking the same land of Zahi, namely Aahmes, who advanced to Sheruhan (the Biblical Sheruhen or Shaaraim, Josh. xix, 6). The name Zahi is, on the tomb of this king, identified with Pen Nekeb, or the Negeb land. It was a country producing wheat (as shown by an inscription of Thothmes III), and also balsam. Fruit trees and wine are also mentioned as products of the land of Zahi, in another inscription of Thothmes III.

It seems curious that this name of Kanaan should apply to a hill fortress, yet the inscriptions seem to leave no doubt on the subject. The state of our geographical knowledge concerning Egyptian conquests does not perhaps justify the certainty with which some authorities identify the Syrian towns conquered by the Pharaohs; but in the present instance the indications are fairly definite and numerous. They show an advance from the vicinity of Gaza by Rehoboth (now *Er Ruheibeh*) and Sharuhen (which I have proposed to find in *Tell esh Sher'ah*), to the hill country which is evidently that included under the term Negeb in the Book of Joshua, namely, the hills south of Hebron.

On Sheet XXI of the Survey, the ruined site of *Kan'an* will be found marked south-west of Hebron. The word is spelt just as on the Egyptian inscriptions, and as the name Canaan is spelt in Hebrew. This word is entirely different from the *Kanân*, which will be found as a name for several ridges of hill in the same district; for the name of the ruin begins with *Caph*, and contains the *Ain* as the third radical, whereas the name for a ridge, spelt with *Koph* and *Aleph*, is the plural of *Kann*, a peak, or hill-top.

The ruin occupies a knoll in a very important position on high ground. The two main roads to Hebron, one from Gaza by Dura (Adoraim), one from Beersheba on the south, join close to the knoll of Khurbet Kan'an, and run thence north-west about $1\frac{1}{2}$ miles to Hebron. West of the ruin is the *'Ain el Unkur*, or spring of "crevisses," which issues from the rock and gives a fine perennial supply, forming a stream even in autumn. The

valley sinks suddenly from the little plateau where the spring issues, forming a deep ravine, now filled with fine orange gardens, orchards, and vineyards. It is here that the lake or pool apparently mentioned on the monuments may have once been formed by the abundant waters of the springs. There were several other good springs rather further west, draining into the same valley (Wâdy el Afranj), and 'Ain Abu el 'Adas, 'Ain Ibrahim, 'Ain Subeih, 'Ain Hameidân, are immediately to the north (see "Memoirs," Vol. III, p. 352, giving the enlarged Survey of the environs of Hebron). A small swamp (El Bussah, "the marsh") still occurs on the north, and the vicinity has a finer water supply than perhaps any spot in the Hebron hills. The vineyards are extensive, not only filling the Vale of Eshcol east of the fortress, but also covering the hill to the north; and the threshing-floors of Dura and Hebron are large. Thus not only is the name identical with that mentioned in the Egyptian records, but all the surroundings of the site, its mountain position, its water supply, its command of the two main lines of advance from Egypt, its situation within the Negeb of the Bible, agree in indicating the identification as certain.

Of the ruin little remains. Foundations occur on the knoll, with a ruined watchtower on the west. It is, however, clearly an ancient site, for rock-cut tombs occur on the west between the knoll and the spring, which are so rudely hewn inside as to be possibly of the most remote antiquity. I had occasion to visit the spot more than once in 1874, and again in 1882, and it has long been considered an important place, though never identified in a satisfactory manner. Dr. Rosen placed Debir at this spot, but the identification of that city with Ed Dhâheriyeh is in every respect more satisfactory. Yet later Mr. T. Saunders has proposed to place Holon here, though why he should do so is a mystery, as the places have only the final *N* (not a radical) in common; the true site of Holon is more probably *Beit 'Aula*, further west.

It appears, then, that King Seti's march was really an attack on the rich vale of Eshcol, the corn and vine lands of Hebron, a raid by one of the easiest ascents from Philistia to the Judean hills, either directed against the Hittites and Amorites and Kenites of Hebron, or (if we take an earlier date for the Exodus) against the children of Caleb. It was the fortress of Kanaan which guarded the approach to this rich country, and which the Egyptians stormed; and it was with a similar object many years later that Rehoboam built a fortress in a somewhat better position, but in the immediate vicinity, namely, at the town of Dura or Adoraim, about two miles to the west.

Curiously enough, Seti took his name from Set, the patron deity of the warlike Hittites, against whom he was contending on this expedition. It was the fall of this fortress of Kanaan, apparently, which opened the way for the triumphs of his son, Rameses II, in his attack on the northern Hittites at Kadesh on Orontes.

BETHANY AND BETHSAIDA.

THIS name *Βηθανία*, only known in the Greek, has received many explanations. It may be only the Aramaic form of the Hebrew Bashan ("soft or sandy soil"), but this does not apply well to the site. On the other hand, we know that the Hebrew nomenclature of Palestine is to a very great extent of Pagan origin. The geographic lists of Karnak agree with Genesis in showing that a Semitic nomenclature existed long before the conquest of Palestine by Joshua, and though in some cases the names were changed by the Jews, in many other instances they were not. Anathoth, for instance, is very probably named from the Assyrian 'Anath. The name Beth Anna is used on Assyrian tablets of the Temple of Beltis, wife of Baal. Possibly this Beth Anna is the real original form of Bethany, and the site was perhaps once occupied by one of the idol temples of Solomon (that of Ashtoreth possibly). See 1 Kings xi, 5-7.

The name 'Anath (which is quite a different word) is found also in Beth Anoth of Judah (now *Beit 'Ainân*) and Beth Anath in Galilee, identified by Sir C. Wilson at 'Ainatha.

Bethsaida,¹ again, is a name which may be compared with the Assyrian Beth Zida ("Temple of Life"), which was the shrine of Nebo and Nana (Mercury and the Moon).

That there is nothing strained in these suggestions is evident when we recall the names Beth Shemesh ("House of the Sun"), Beth Dagon, Beth Peor, together with numerous towns named from Baal. Ashtoreth Carnaim is another instance, and Dan, mentioned before the tribe of Dan inhabited the spot (Gen. xiv, 14)—indeed before Dan was born—may have been named from Daian Nissi ("the Judge of Men"), an old Assyrian name of the Sun, whence the later Dionysus is derived, for Dan in all ages was a centre of Sun worship.

C. R. C.

NOTES.

THE *Quarterly Statement* for July contains one or two points which may excuse a note.

Ashasharat el 'Arais (p. 120) given as a name of some trees by Mr. L. Oliphant, is apparently a misprint for *esh Shejerât el 'Arâis*, which means "the Trees of Bridegrooms" (pl.), not the "bridegroom's" (sing).

¹ In last *Quarterly* I have called attention to the name Abu Sudûn as occurring in Galilee, and perhaps connected with Poseidon. It might be objected that the *Yod* which occurs in the Hebrew Sidon is not found in Abu Sudûn. But in the Phœnician inscriptions from Athens and Carthage we find Sidon spelt without the *Yod*; and we also find a Carthaginian deity called *𐤌𐤓𐤏* who is no doubt connected with the same idea.

The name is commonly applied to springs in Palestine to the east and west of Jordan.

The name *Mezra'h* (p. 121) can hardly be considered more than descriptive ; it means "the sown land," and applies to every sown plot in the country.

The discovery of Roman remains (p. 140) near Port Saïd, and the account of towns by Ptolemy (whose latitudes are not reliable), cannot be considered to conflict with my statements. Roman remains in Egypt cannot be much older than the Christian era, and Ptolemy lived yet later. My remarks referred to events occurring at least 1,500 years earlier.

C. R. C.

ARAB TRIBE MARKS (AUSAM).

THE following tribe marks were collected both east and west of Jordan, and are of considerable importance for several reasons.

T This, with the next, was found inscribed on the walls at Masada by De Sauley, who mistook both for planetary signs.

The tribe marks at Ammân he also copied, but was unable to give any explanation of the meaning. The sign is that of the Jâhalin tribe who live in the vicinity of Masada.

♀ This is the tribe mark of the Rasheideh, an old tribe now nearly extinct, in the vicinity of Engedi. The sign which is now used as that of the planet Venus is the *Ankh* in Egypt, and is found in Assyria as early as 1500 B.C., as a symbol probably of the planet Venus. The Abu Nuseir use a similar mark, and I have found it also east of Jordan.

) A tribe mark at Masada, although the tribe was not ascertained. This is one of the common Himyarite forms of the letter *Resh*.


| The tribe mark of the elder branch of the 'Adwân ('Ashîret Dîâb). This is the Himyarite numeral *one*.


|| The mark of the second or junior branch of the 'Adwân ('Ashîret en Nimr) is the Himyarite No. 2.


||| The mark of the 'Abbâd, allied to the 'Adwân, is the Himyarite No. 3.


γ The mark of the 'Ajermeh, an old tribe near Heshbon. This is the Æthiopic *Gimel*. It is also found with a single stroke, marking a subdivision of the tribe. It is sometimes reversed and becomes *Lamed*. It is the Nabathean *Daleth*.


^ Another 'Ajermeh mark ; is also probably *Lamed*, as in Æthiopic It may also be a *Samech* or a *Gimel* in Nabathean (Sûfa inscriptions).


 The Da'ja mark, a tribe near 'Ammân, is the 'Ain common to so many Semitic alphabets.


 The Beni Hassan mark near Sûf and Jerâsh closely approaches the Himyaritic *Resh* or Nabathean *Beth* (Safa).


 A mark of one of the Belka tribes near Heshbon, somewhat like one of the Himyaritic letters, namely *Theh*, which is also used as a numeral; or it may be the Æthiopic *Vau*.


 The mark of the Beni Sakhr, which they call "the coffee-spoon," is the Himyaritic *Yod*; also found in Safa inscriptions.


 Another mark of the Fâiz family of the Beni Sakhr, is called "the necklace." This is the Himyaritic *Tza*, but bears no resemblance to the *Teth* of the same alphabet.


 Another division of the same great tribe is perhaps only a variation of the "coffee-spoon," but approaches the Æthiopic *Daleth*. The preceding mark and the coffee-spoon occur with a single stroke to show the elder family of the tribe division bearing the mark.


 The mark of the Jibbûr, a division of the Beni Sakhr. They say it is not a cross, but it is clearly the *Tau* of Himyarite and other Semitic alphabets.


 The "Raven's foot" is also used by the Jibbûr. This is the Himyaritic *Heh*, but more nearly akin to the Nabathean form of the letter.


 Used by divisions of the Khurshân, who belong to the Beni Sakhr tribes. These approach the Himyaritic and Æthiopic *Vau*.

 The mark of the Sherârât, also a division of the Beni Sakhr. This is the Himyaritic *Tzadi*, a very peculiar form not found in other Semitic alphabets.

 A mark of the Sh'alân, who are a division of the 'Anezeh. It somewhat resembles the Æthiopic *Beth*.

 A mark of the Kowâkbeh, who are a division of the 'Anezeh. This also may be a *Beth* approaching the Nabathean and Palmyrene forms.

 A mark of the Shawâbkeh, another Belka division. This may be a *Resh*, as in Nabathean. It is akin to the 'Ajermeh mark.

 Called "the door," is the mark of the Khadîr, also a division of the Beni Sakhr. This appears to be the Himyarite *Beth*, and it is interesting in this case to see the name of the latter still preserved, for *Bab*, or door, is the *Beth* in Hebrew also.

These marks I obtained on the spot, and they were explained to me by the Arabs themselves, who, however, being unable to read, have no idea of the derivation or meaning of the marks which they use on camels and other stock, also on tombs, and which they place on the walls of ruins where they suppose treasure to be concealed, to which they thus lay claim. They also place these marks on menhirs and dolmens, and on solitary

stones, and sometimes in such numbers as to have the appearance of inscriptions.

The German Palestine Society published a number of these tribe marks in 1879 with the title *Inscripfen*, including many of the marks above given. The distinction between real inscriptions and collections of tribe marks is, however, simple, because Nabathean and Himyaritic inscriptions are written in regular lines.

It is natural that some of these marks should originate from a southern Semitic alphabet, because the stronger Arab tribes which exist in a nomadic condition in Syria originate from Yemen and the Nejed. They began to push northwards a little after the Christian era, and have gone on migrating in this direction ever since. We should naturally expect inscriptions in the same character east of Jordan, and, as mentioned in another paper, four such inscriptions have recently been found, but these belong probably to the time of the semi-civilisation when Zenobia ruled in Palmyra; for the majority of the Bedawin share the peculiarity of which Muhammed was proud, being quite unable to write or read. The list of tribe marks is by no means as perfect as could be desired, but it is sufficiently long to indicate clearly the origin of these signs. It is noticeable, however, that while the 'Adwân and Beni Sakhr marks are letters of the south Semitic alphabet, the Ausâm (pl. of Wusm) of the 'Ajermeh and other old Belka tribes are nearer to the Nabathean and Thamudite. The Belka tribes are probably of the old Nabathean stock, but the dominant tribes—Beni, Sakhr, and 'Adwân—immigrated from Arabia some three centuries ago. The distinction is thus natural and very instructive.

C. R. C.

APHEK.

THIS word in Syriac is said to mean "springs." At Afka on Lebanon magnificent springs occur, as also at 'Ain Fiji, and at Fikich. The Aphek east of the Sea of Galilee is also in a situation with water, and the derivation seems thus to suggest that other Apheks would be at or near springs.

In Judah we have an Aphek, or Aphekah (Josh. xii, 18; 15, 53; 1 Sam. iv, 1), which some writers have conjectured to be the present Kustul. There is no connection of name, and nothing beyond an insignificant land spring, at that place. The Aphek of Joshua xii, 18 may be a northern Aphek near or on Gilboa, perhaps Fukû'a (1 Sam. xxix, 1), or Fûleh, near the well-watered valley of Jezreel. The Aphek of Joshua xv, 53 was not far from Beth Tappuah (Tuffûh, near Hebron) and Humtah (perhaps Khamasa). The Aphek of 1 Samuel iv, 1 was on the way from Mizpeh to Philistia. It may perhaps be thought to be the present Wad Fûkîn, the Pekiin of the Talmud, which is close to Khamasa, and situated in a remarkably well-watered valley beside one of the main high roads

from Philistia to Jerusalem. It is curious to note that there is a Fikieh near Bâb el Wâd, on the road from Ramleh to Jerusalem, and a convent of El 'Azar east of it near Abu Ghosh. These may represent an early tradition of the episode of 1 Samuel iv, being sites respectively for Aphek and Ebenczer; but the Christian origin of the latter site, and the fact that Fikieh is not near any spring, seem to preclude the acceptance of these sites as genuine. If, however, a line be drawn from Neby Samwîl through Deir el 'Azar south-west it nearly strikes 'Aslîn, which has been thought to be Ashnah (Josh. xv, 33), a name very close to Shen. Ebenezer was between Mizpeh and Shen.

No real trace of Ebenezer has yet been found, and the whole topography of the episode is vague. Deir el 'Azar occupies a very prominent site looking down towards the plain of Sharon. The ruins, which I revisited in 1881, present heaps of stones and large cisterns. It seems to me probable that it was once supposed to be the site of Ebenezer, and that the Philistine camp was then supposed to have been in the Merj Fikieh at the bottom of the pass. I have pointed out that Jerome places Ebenezer at Dier Abân, no doubt supposing 'Ain Shems to be Shen; but this tradition seems far less probable than even the localisation now suggested. The evidence is perhaps hardly strong enough to allow of our considering Deir el 'Azar to be the real Ebenezer, but its claims ought not to be forgotten, as 'Azar and Ezer are the same word.

C. R. C.

HAZOR.

THIS name, so common in the old nomenclature of Palestine, signifies "enclosure," and has been thought to refer to cattle-yards. The aboriginal Avim "dwelt in Hazarim" (Deut. ii, 23), but the name Baal Hazor suggests a religious enclosure. In the vicinity of Kefrein we found a Tell Mahder, the name of which is radically the same as the Hebrew Hazor. The top of the Tell is surrounded by a great wall of stones piled up in a circle. Many such circles, some of great size, occur on the plateau above, and appear to be very ancient. It may be suggested that the name Hazor applied to such circles, and that they had (as in other lands) a sacred origin.

C. R. C.

DIBLATHAIM,

"THE two cakes," or discs, was a town of Moab (Jer. xlviii, 32), and Diblath (now *Dibl*) of Galilee (Ezek. vi, 14). The name is a very curious one, and occurs on the Moabite Stone. Now in Moab we discovered immense stone discs resembling millstones, but not pierced in the middle, and

too large for ordinary use as millstones. Possibly these may explain the name Diblathaim, and one of them occurs at a site which would be appropriate for Almon Diblathaim, but which is now called Kueijiyeh ("the head ornament").

C. R. C.

RAMOTH LEHI.

(Judg. xv, 9-19.)

THE early Christian tradition, as noted by Reland and Robinson, would seem to place this site close to Eleutheropolis or Beit Jibrîn, where Samson's fountain was shown. This probably accounts for the name of the ruin Shemsânîyat, or "the Samson places," west of Beit Jibrîn.

Aquila and Symmachus render the name by the Greek Σιαγων, as Eusebius notes in the Onomasticon. This might be thought to have some connection with the ruin of *Siâgh* east of Beth-Shemesh, for Josephus also uses this name ("Ant.," V., iii, 8), and the vicinity to Beit 'Atâb (the Rock Etam) seems appropriate. It is not, however, very probable that the name would survive in Greek. A spring exists near, and the name of Lehi ("the jaw") might very well be given to the gorge of Wâdy Ism'âîn immediately north, but these indications are too feeble to give any real identification.

Other indications further west are noticed in "Tent Work" (Vol. I, p. 276), which are perhaps more satisfactory, but do not amount to identification. The district was re-explored in 1881, but no further light on the matter was obtained.

Lehi seems to have been a district, and Enhakkore a spring in this district. There are springs called 'Ayûn Kâra near the coast, north of Yebnah, which might be thought to be connected by name with Enhakkore, but these are probably too far west. Near Siâgh there is a ruin, Marmîta, which might be thought to preserve the name Ramoth, the *M* being only a servile.

Near Gaza is the village Beit Lâhi (the *H* is not, however, a guttural). This place is noticed in the life of Hilarion, and by Sozomen ("Hist. Eccles.," V, chap. v). The latter authority supposes it to have been named from an ancient temple still represented by a mosque. It is not probable that this has anything to do with Lehi. Finally, there is a Beit Leyi on the Roman road south of Beit Jibrîn. This may be named from the Christian tradition as to the site as above noticed, but this does not seem a very probable site, because it is far away from Samson's country.

The general result of two special visits of exploration, and of a collection of the general literature of the subject, thus seems unfortunately to leave us still in doubt. I am inclined to think that what has been said in "Tent Work" represents the nearest approach to probability attainable.

C. R. C.

JUDAH ON JORDAN.

(Josh. xix, 34.)

A SIMPLE explanation of this curious reading occurs to me as follows. The Hebrew is—

וְכִי הוּדָה הַיַּרְדֵּן

The *Daleth* and the *Resh* are so easily confused, and are so well known to have been confused in many cases in the Old Testament, as also the *Heth* and the *Cheth*, that we might very well read Hurah for Hudah.

Hurah ha Yarden would mean "the Hollow of Jordan," and is thus equivalent to the *Ghor*, or hollow, which was the real east boundary of Naphthali—just as "Judah on Jordan" is said to be. The roots Kûr, Ghor, and Khor are all allied to each other. It is interesting to find the Ghor noticed under this name in the Bible.

C. R. C.

SAUL'S JOURNEY.

THIS question is likely to be long-disputed because of the meagre nature of our information. I may perhaps be allowed once more to state a route which seems intelligible. It does not seem to me that any value attaches to ideas of *view* from any point on the journey, because nothing is said in the Bible about such a view. It is assumed by the disputants in the last *Quarterly Statement* that the "land of Benjamin" is mentioned in connection with Saul's journey. This is not the case. The Hebrew says (1 Sam. ix, 4) "he went across the *Aretz Yemeni*." This may be rendered "the land of the south," and seems to show a change of direction. It is not said whence Saul started, whether from Zelah or Gibeah. But he went—

Through Har Ephraim — Jebel Nâblus.

„ Aretz Shalisha — probably near Kefr Thilth.

„ Aretz Sh'alîm = "land of caverns."

„ Aretz Yemeni = "land of south."

To Aretz Tzûph, or "of the view."

This name in Arabic might be either Safa or Shûfa. I should be sorry to be too positive as to the exact site of the Nameless City, but Kirjath-Jearim is a very likely place for Samuel to have visited, because the ark was then at this city. It stands on the south side of a valley, and on the north side just opposite is a ridge with two ruins called *Shûfa*, which may represent Zuph very properly.

There is a curious indication also in the expression "the end of the city" (verse 27), for this expression is also used of Kirjath-Jearim (Josh. xviii, 15). It refers, perhaps, to the curious spur on which the old ruin 'Erma stands.

There is another point, perhaps not very important but yet worth noting. Josephus (who, however, had only the Old Testament to guide him) calls the Nameless City Ramah. This might be his rendering of Arim, the later form of Jearim (Ezra ii, 25). From Kirjath-Jearim the route which would most easily be followed is along the ancient highway which leads east to El Khudr, and joins the Hebron road near that town: thence Saul would go north and pass naturally by Rachel's tomb (1 Sam. x, 2). As to the return, it seems to me as clear as anything can well be that it was to Gibeah of Saul, called in full Gibeah ha Elohim, a sacred place where there was a "garrison" (Speaker's Commentary would render "pillar") of the Philistines. The word here is נֶצֶב as in 1 Samuel xiii, 3, and it is identical with the Arabic *Nusb*, which means in the Korân and in common use a menhir and nothing else. There was such a Netzeb at Geba as mentioned in the latter passage, and there seems no reason why the place should not be the same in both cases, viz., *Jeb'a* near Michmash.

Mr. Shapira's rendering of 1 Samuel x, 2 has no particular value, because it is not the meaning of the Hebrew. Mr. T. Saunders only reproduces very old-fashioned views as to Ramah founded on the facts that Samuel had an ancestor named Zuph, a man of Mount Ephraim (1 Sam. i, 1), and that Ramah and Bethlehem are connected in the New Testament (Matt. ii, 18). It is surely quite impossible to extend Mount Ephraim so far south as Mr. Saunders would do. The latter gentleman has, however, shown so little respect for either topography or philology in his theories that, in my opinion, he should not be cited as an authority. Mr. Birch's objections to this view as to Ramathaim-Zophim seem to me to be very strong.

C. R. C.

SUPPOSED NABATHEAN AND HIMYARITIC TEXTS FROM MEDEBA.

3rd August, 1883

THESE four inscriptions are preserved in the Latin Patriarchate at Jerusalem, where I saw and copied them in 1881. They had been sent by the Latin missionaries from Medeba, east of Jordan, and were discovered early in 1881. Visiting Medeba in August of the same year I was informed that they had all been found by excavation, or amid heaps of fallen stones, when the newly-established Latin colony, at this ruined city, was engaged in building up rude drystone enclosures for their cattle. It is possibly one of these stones which Canon Tristram saw in 1872, and which he mentions of an illegible Phœnician text (many of the letters being similar to those of the Phœnician alphabet). He saw also Latin and Greek texts, which seem to have been since removed or destroyed ("Land of Moab," p. 311).

These inscriptions are in characters quite different, as a rule, from the alphabet of the "Moabite pottery;" and it does not appear that they have ever passed through the hands of any person interested in the said

pottery. No. I is on a limestone slab of rude shape, cracked on the right, and measuring 15 inches in length by 12 inches in height, the text occupying about 5 inches by 8 inches. It seems nearest the Sinaitic.

No. I.

347JF>U P
~YUV? 5

No. II.

07EJL, 1H E7~T YAT
1E 7X 19 E 7Y Y7

No. III.

3TJ00A+VO
JO +7 7BT YX
XB↑BX Y9A7
2FO^FV

No. IV.

2XLKVL
F15T 4479
Y>L9Y17J

No. II is on another limestone slab, 20 inches long and 8 inches high. The text occupies 18 inches by 3 inches. This is perhaps the most curious of the four.

No. III is much better preserved than the two preceding, and the letters are closely like the forms of the Himyaritic or Sabeian alphabet. The stone, also a slab of limestone, is 11 inches long and 8 inches high; the text occupies 9 inches by 4 inches.

No. IV, also well preserved, is on a slab 12 inches by 9 inches, and the text occupies 9 inches by 6 inches. It approaches Palmyrene.














The Latin ecclesiastics offered no opinion as to these stones, but were convinced that they were genuine inscriptions. They had not, I understood, shown them to any good archæological authority, but most courteously allowed me to measure and copy the inscriptions, and said that they would be glad to be informed of their value. I forwarded a copy at once to England for the examination of scholars, but it would seem to have been lost in the post, as it excited no interest.

























As regards the likelihood of the genuineness of the inscriptions, it should be noticed that Medeba was an important town in the second century, and as late at least as the fifth. The immigration of Arab tribes from Yemen, in the second century A.D., is well known to have led to the settlement of the Beni Ghassân tribe in the Hauran, and no doubt at the same time other Arab tribes would have invaded the Moab plateau round Medeba. There are many indications of Himyar and Sabeian influence in the district,

including legends of the Tobba Queen Belkís, together with the survival of the word *Nejis*, used in southern Arabic and in Æthiopic for a king or ruler. There is a ruin called *Homrtyeh*, or "Himyarite," and another, *Kusr el Homrah*, which (as there is no red colour at the place) probably means the "Himyarite palace." This last name applies to a building close to Hesbân, on the north. These remarks apply specially to No. 3; for the others are nearer Nabathean than to Sabean.

A favourable opinion as to the value of the texts has been given by the Rev. Isaac Taylor,⁵ in a private letter to me; but he remarks (as I had also done in writing to him) that no recognised alphabet contains all the letters of either of the texts.

The discovery of inscriptions by Halevy in Yemen, concerning which many learned papers by Captain Prideaux will be found in the "Transactions of the Society of Biblical Archæology" (Vols. II, IV, V, VI), has thrown a flood of light on the history of the southern Semitic alphabet, and the present texts may perhaps serve to form some kind of link with the Nabathean and Palmyrene. A few notes are here hazarded, with a list of the symbols, which may be useful to any scholar who is able to decipher the inscriptions.

- 1  In No. 3, line 2, is perhaps the *Aleph*, as in Himyarite and in the Safa inscriptions.
- 2  In No. 2, line 2, and No. 4, line 3, is perhaps the *Beth*, as in Sabean, or perhaps *Tau*, as in Nabathean.
- 3  In No. 2, resembles somewhat the Æthiopic *Beth*, but is also like the Sassanian *Heh* of the fourth century A.D.
- 4  In No. 4, line 2, possibly the *Daleth*, as in the Haurân, or at 'Arâk el Emîr.
- 5  In No. 2, perhaps the *Gimel*, as in Æthiopic. It may, however, be a *Daleth*, as in Nabathean of the fourth century A.D.
- 6  In No. 3 and No. 4, appears to be the Nabathean *Heth*; the right hand form might, however, be a Nabathean *Shin*.
- 7  In No. 3, line 1. This is the Himyarite *Vau*. It is also a sign common in Cypriote and Lycian as *T*. The Safa *Vau* seems to occur as the last letter of No. IV.
- 8  In No. 4, might be the Nabathean or Sabean *Nun*; it is also possibly *Lam*.
- 9  In No. 2, line 1, resembles the Æthiopic *Zain* and *Dhal*, which are letters originally identical. It is not unlike the Palmyrene *Tzadi*.
- 10  In No. 1, No. 2, and No. 4, is the Nabathean *Gimel*. Also found in Palmyrene and other Aramaic alphabets. In Aramean, however, the *Yod* takes this form.
- 11  In No. 3, lines 2 and 4, is one form of the Himyarite *Yod*. It only occurs in this inscription, which is throughout nearest to the south Semitic types.
- 12  In No. 2, line 2, is not unlike the Æthiopic *Caph*. It may be a *Samech*, or may be the same as No. 2.
- 13  In No. 1 (possibly in No. 2, No. 3, and No. 4), seems to resemble one Himyaritic form of *Lamed*.

- 14  In No. 1 and No. 2, resembles the Nabathean *Lamed*.
- 15  On No. 2 only (line 2), is the very distinctive Himyarite *Mem*.
- 16  On No. 3 only (lines 1 and 2), is probably the Himyaritic *Nun*.
- 17  On No. 1 resembles the Sabeian and Æthiopic *Nun*. It is, perhaps, the same as No. 8, though the top stroke is longer.
- 18  On No. 2, line 2, though like the early Hebrew *Caph*, is probably the *Heh*, as at Safa, and in Sabeian.
- 19  In Nos. 2 and 3, is the Semitic *Ain* common to many alphabets distinctive as not Aramean. It is small and round as in Sabeian.
- 20  (Compare 14) on No. 1, resembles a Nabathean *Peh*. But it is most probably a *Lamed*.
- 21  In No. 1, might be the *Koph*, or perhaps *Yod*, or even *Vau*, as in south Semitic alphabets.
- 22  No. 1, line 2, is like the *Resh* on Sassanian coins of the fourth century, or the *Vau* of the same alphabets.
- 23  No. 3 and No. 4, probably the Himyarite *Resh*, as in alphabets derived from the Tyrian.
- 24  No. 3 might also be *Beth* or *Koph* in Himyarite, or in Nabathean respectively.
- 25  No. 3 and No. 4 is the *Tau* in many Semitic alphabets. It is distinctive as not having the Aramean form.
- 26  On No. 1 (see 13). Might be the *Heh*, as in Æthiopic, or possibly the same as in line 2, a *Lamed*.
- 27  On No. 1, is something like a *Resh* in Himyaritic, differing from 23. This is a form on the Sinaitic inscriptions also.
- 28  Might be a *Tzade* or *Shin*. There are several other letters of somewhat similar form, such as the Palmyrene *Zain*.
- 29  On No. 1, line 1, is most like a *Caph* in Nabathean, or might be perhaps a *Shin*. The ordinary *Shin* of the Sabeian alphabet is not found.
- 30  An extraordinary form on No. 1. Perhaps a Nabathean *Shin*.
- 31  This approaches the *Beth* in Nabathean, and in Palmyrene. It may be a *Nun*, as at 'Arak el Emîr.
- 32  Perhaps *Tzadi*, as in Palmyrene, and in Sassanian inscriptions.
- 33  Perhaps a rude *Aleph*. See Nos. 6 and 37.
- 34  Possibly a form of *Samech*, as in Tyrian alphabets.
- 35  Is nearest to the Æthiopic *Lamed*, or may perhaps be a *Gimel*, or a *Samech*.
- 36  Possibly another *Lamed*, or *Resh*, as in Sabeian reversed.
- 37  In No. 4 (and perhaps in No. 1) might be an *Aleph*.

38 | In Nos. 2 and 4, is a numeral (No. 1) in Sabea texts. It might also be a form of *Zain*, as in Palmyrene.

39 ⊥ Perhaps a careless *Zain*, as in Palmyrene.

40 1 Perhaps a careless *Yod*, but is now probably a *Gimel*. In No. 4, lines 1 and 3, a somewhat similar letter with the cross strokes rising, is, perhaps, the Aramean distinctive form of *Ain*.

Some margin must be allowed for carelessness, for the inscriptions are not very well executed on the whole. No. I seems nearest to Nabathean, and No. III to Sabea, and each text must of course be considered separately. As the genuineness of the texts may possibly be called in question it should be noted that forms 6, 15, 21, 24, 31, occur on the Moabite pottery. They were pointed out during the controversy as showing the pottery to be forged, because they were there found, not as in the present instance with the Himyaritic and Aramean forms, but with the alphabet of the Moabite Stone, which was considered impossible.

The inscriptions should also be compared with the Palmyrene, and (as Rev. Isaac Taylor points out) with the Proto-Pehlevi. Forms 2, 4, 10, 14, 31, 32, and 38 have much in common with the Palmyrene, and with early alphabets of the second century A.D., from which modern square Hebrew is supposed to have developed (although perhaps earlier than is sometimes admitted). In Zend and in Pehlevi there are also forms worthy of consideration, as resembling Nos. 5, 22, 32.

The situation of Medeba gives great interest to the inquiry; for on the one hand we have the inscriptions of Sinai and of Arabia to compare, and on the other those of Palmyra, and the Sâfa, from the first to the third centuries A.D. As far as I have been able to ascertain no such inscriptions have before been found in the Belka, though Nabathean inscriptions of the Hauran were recovered by De Vogüé. We have a good many Greek inscriptions at Jerâsh and elsewhere, and to these the Moabite Stone and the Tyrus inscription must be added;¹ but as yet we have no relics of the great age of the Beni Ghassân and of Queen Zenobia, which we should naturally expect to be represented by inscriptions in Moab. If scholars are satisfied of the genuineness of these four inscriptions, casts can no doubt be procured, but as they are very legible on the whole, I believe the copies will be found fairly accurate.

It should be noted that the Palmyrene and Iranian alphabets and square Hebrew come from the Aramean branch of the Semitic alphabets, with Nabathean, Thamudite, and the scripts of Petra and Sinai. The Sinaitic inscriptions are as late as the fifth century A.D., and are very like the present inscriptions Nos. I, II, IV. The south Semitic alphabets were

¹ The Tyrus text is of great value, being probably dated as 176 B.C. It only contains five letters, the first of which is the Phœnician *Ain*, and the fourth the Phœnician *Yod*. The second, third, and fifth letters are, on the other hand, of the Nabathean, Palmyrene, or square Hebrew type. Thus the inscription seems to blend the two branches of the Semitic alphabet together, which may also prove the case in the present text, No. II.

EGYPTIAN.

HITTITE.

EGYPTIAN.

HITTITE.

EGYPTIAN.

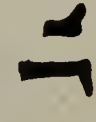
HITTITE.

EGYPTIAN.

HITTITE.



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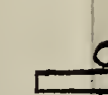
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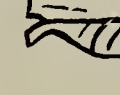
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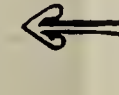
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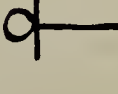
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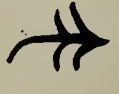
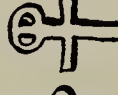
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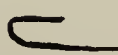
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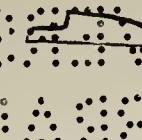
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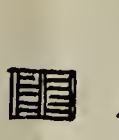
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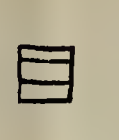
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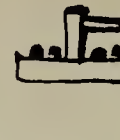
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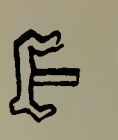
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distinctly derived, and No. III is more distinctly of Southern origin. No. IV seems nearest Palmyrene. No. II contains Aramean forms, together with the older form of the *'Ain*, which is not Aramean. The Aramean *'Ain* occurs in No. IV.

I would note, finally, that the Moabite Arabs use Himyaritic and Nabathean letters as *Ausām*, or tribe marks (as I hope to show in "Heth and Moab"). These must not be mistaken for inscriptions, where they are found (as is often the case) cut in numbers on some monument or sacred stone. It is not difficult to make the distinction, partly because the tribe marks are cut irregularly and not in lines, partly because they are generally recent and very rudely cut. Nevertheless this mistake has been made by more than one traveller in Moab and in Arabia.

C. R. C.

THE HAMATHITE INSCRIPTIONS.

1st September, 1883.

IN the last *Quarterly Statement* (p. 133) I ventured to draw attention to the similarities of the Hittite and of the earliest Egyptian hieroglyphics. I have since been encouraged to pursue the comparison further, and to draw up a list of sixty-one Hittite symbols, for which a parallel may be found in Egyptian. I am aware of the comparisons made by Professor Sayce between the Lycian, Cypriote, and Hittite symbols; but it seems possible that the suggestion, to which I am now anxious to draw the attention of Egyptologists, will not ultimately conflict with these comparisons. I am also aware that the Hittite symbols have been compared with hieratic, without any very useful result; but it seems more likely that the key of one monumental system should be found in another, than that the monumental Hittite symbols should resemble that literary character which derives from the hieroglyphic or monumental Egyptian.

Among the symbols compared many of the Egyptian are ideographic signs, or determinatives, while others are well-known alphabetic forms; but as these occur together in Egyptian they may perhaps do so also in Hittite, and the comparison does not therefore seem to be vitiated. It is true that many normal Egyptian forms (such as the *Mem*, the *Caph*, the *Resh*) are not apparently traceable on the Hittite texts; but, on the other hand, the signs commonest in Hittite seem, as a rule, to be equivalent to common Egyptian symbols. The comparatively small number of signs used in Hittite reminds us of the selection by Thothmes III of a few of the commonest Egyptian symbols in his transliteration of the names of Semitic towns in the Karnak lists.

A few notes may be added as to some of the most interesting of these comparisons, but first I would note that all the Hittite texts as yet published appear to be written *boustrophedon*, or in lines alternately from left to right and from right to left. This has already been remarked in

the case of the Hamath stones, and a careful study of the texts, which now number over a dozen in all, brings this prominently before the attention. The heads, the figures of birds, and of beasts, &c., are all looking to the right in the first line, while in the second these same symbols will reappear all looking to the left, and in the third again to the right. One would be inclined to suppose that all these texts read from the left-hand top corner, were it not that in at least four cases the emblem No. 1 of my plate stands at the right-hand top corner, and seems to begin the text with a determinative, indicating speech.

The Hittite texts do not seem to be works of consummate art. The representations are far ruder than those of Egyptian hieroglyphics, and the symbol is not always exactly reproduced on each repetition. This may be due in part to the hardness of the basalt on which these figures are cut in relief; and the difference between the Egyptian and the Hittite is often in great measure due to the fact that, while the former symbols are cut *intaglio*, or painted, the latter are hewn in relief. For this reason also, perhaps, the old wooden hieroglyphs of Hosi's tomb (in relief) are much more like the Hittite texts than are the finished symbols cut *intaglio* at a later age. All the Hittite texts as yet published are in relief, although one in *intaglio* has been discovered by Sir C. W. Wilson, thus approaching even closer to Egyptian.

The Egyptian equivalents (if so they be) I have taken from well-authenticated copies of texts of all ages; but on the whole it seems to me that the oldest Egyptian texts give more forms for comparison than the later. The Hittite signs are mainly taken from photographs.

No. 1 is, I believe, a determinative in Egyptian. The finger raised to the lips indicates in Egyptian verbs of "speech"; No. 2, is the *Beth* in Egyptian; No. 4, *Daleth*; No. 13, perhaps *Vau*; No. 15, a determinative of verbs of action; No. 16, *Tau*; No. 21, *Tzadi* or *Teth*; No. 28, *Shin*; No. 32, *Samech*;¹ No. 34, *Vau*; No. 35, *Mim*; No. 42, *Gimel*; No. 43, the determinative for countries; No. 44, *Koph*; No. 45, *Tzadi*; No. 48, perhaps *Aleph*, &c. These are obtained by comparison with the normal Egyptian alphabet, and by the values assigned to the hieroglyphic in connection with the Semitic alphabet on the Pylons of Karnak. Some symbols, on the other hand, like Nos. 7 and 8, though not belonging to the normal alphabet, are found on the wooden text of Hosi's tomb, and on other early Egyptian inscriptions.² No. 50, in Egyptian, is the sign for the backbone, which has been compared with the linear Babylonian Cuneiform.

These are but a few examples given as showing the possible value of the comparison, but most of the symbols will be at once recognised by Egyptologists as of common occurrence, and of well-known significance.

¹ No. 32 would appear to be also an *S*, and this agrees in a very remarkable manner with Professor Sayce's comparison with the *Se* of the Cypriote syllabary.

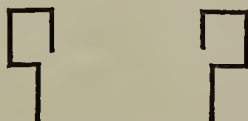
² Professor Sayce compares No. 23 to the Cypriote *Ko*, but as the syllabary did not distinguish *K* and *Kh*, this seems not to oppose the identification with *Cheth*.

The only questions which will arise are as to the closeness of the comparison with the Hittite, and as to the meaning in Hittite of the symbols, and also concerning the language in which the inscriptions are written.

In connection with this side of the question I would draw attention to the peculiarly Egyptian character of many signs. This is not only the case with No. 1, which may be called the head of Im-hotep, but also with No. 11, which has been likened to the scarabeus by several writers on the Hamath stones. No. 18 may not perhaps be considered a good comparison, but in Egypt *Bes* is represented with his tongue protruding, and similar masks occur not only in Asia but even in the statues of South America. No. 12 may be compared with the ram-headed Kneph. No. 14 seems to be a donkey's or fawn's head, perhaps recalling the ass's head of *Aau*, or of *Set*. No. 27, the *Ankh*, and No. 26, the *Cross*, are found also in Assyria, and Nos. 29 and 23 may also be observed among Assyrian emblems. No. 54 is one of the most interesting because most artificial. No. 26 and No. 22 have been compared to the so-called emblem of stability in Egypt. No. 24 was long since said to be a mitre, and seems to bear a close resemblance to the *Pshent*, which occurs very often in hieroglyphic inscriptions.

I am far from supposing that this comparison is perfectly satisfactory. I have no doubt that Egyptologists who are familiar with the list of 400 Egyptian emblems will be able materially to improve on this rough first sketch of the subject. There are several emblems yet left, including a bear's head, a divided circle,¹ and a few doubtful forms for which I have

Another character found at Carehemish, and also on Babylonian seals, is the following:—



It may be compared with the Egyptian *Hch*—



¹ Professor Sayce has written at length on this sign ㊦, which may perhaps represent the '*Ain*, if we follow his reasoning as to the goddess '*Ate*. In this case it is to be compared with the hieroglyphic *Ain* which is the eye of Osiris. As to the signs resembling No. 27 of our plate, which occur in the hands of various deities at Boghaz Keui, I believe them to be variations of the *Ankh*, and probably phallic emblems. No student of hieroglyphics will deny that unmistakable phallic emblems occur in Egyptian writing, and the fact is admitted by Renouf, Pierret, and other authorities. It may have considerable value in assisting us to determine the value of various signs and the genders of nouns. Layard has given a cut representing a deity on a lion with such an emblem in his hand, and the *Ankh* is held by all Egyptian deities.

The information given in Professor Sayce's paper ("Transactions of the Society of Biblical Archaeology," 1881, pp. 248-293) does not seem in any way to conflict with the suggestions of the present paper.

been able to find no equivalent. On the whole, however, the list represents the great bulk of the symbols, which recur again and again in the Hittite texts. In 1877 Professor Sayce published a list of fifty-six symbols. The present table contains a few more. Those for which Professor Sayce obtained very similar Cypriote characters are Nos. 25, 21, 47, 44 ; but, on the whole, I venture to think that the present comparison is fuller and more satisfactory. It seems hardly possible that so many coincidences can occur together merely by accident, and without giving any result.

I would propose, then, that, in the first place, an attempt should be made to read these inscriptions as though Egyptian, both in symbolism and in language, each line being read alternately right and left, beginning on the right in the first line. If it be ascertained that the language is not Egyptian, we might still use the symbols with the Egyptian value, and endeavour to interpret the language by aid of Accadian or of some kindred Turanian tongue, on the supposition that the Hittites borrowed hieroglyphic signs from Egypt as the Phœnicians borrowed the hieratic. Mr. D. I. Heath believes that the inscriptions are written in a Semitic tongue, which is of course also, *primâ facie*, very possible, considering that the monuments occur either in or on the border of a Semitic land ; and though the evidence so far goes against the supposition that the Hittites were a Semitic people, it must not be forgotten that they had Semitic deities (Ashtoreth, Baal, &c.), and were near neighbours of the Phœnicians. While it yet remains to be proved that the inscriptions in question really are of Hittite origin.

Without wishing for a moment to be thought ignorant of the valuable work of Professor Sayce concerning Hittite antiquities, I would venture to urge that, although it may be convenient to class all the new monuments and texts under the title Hittite, it must be considered only a provisional term, and the fact yet remains to be proved. The character may be Alarodian or may be that of the old Caucasian type, whence the Egyptians were derived. The Hittites were one tribe of a great race, but we know the names of many other kindred tribes further north. Until the language of the inscriptions is determined we are unable to state positively what race invented the character, and although it has been shown that the Hittite language was probably Aryan or Turanian, and not Semitic (as evidenced by the titles following the proper names, and by the proper names of Hittite princes themselves), it yet remains to be shown that the inscriptions are not in a Semitic tongue. At Ibreez the figures have the beard and whiskers with shaven moustache, which, as we know from the Egyptian monuments, was a Phœnician fashion. The probabilities are perhaps in favour of a non-Semitic origin of the so-called Hittite inscriptions, but as yet nothing is proven.

My reasons for making these suggestions are mainly historical. The Hittite texts (as we may continue to call them, since they are found in the land of the Hittites) might be either a rude and not very intelligent reproduction of Egyptian hieroglyphics, borrowed by the less civilised from the more advanced race ; or, on the other hand, they may be

extremely archaic, and represent the true Asiatic origin of the Egyptian system. It is well known that the Egyptians came from Asia, and certain tribes which they greatly respected, because they were circumcised (the Caucasians, Achæans, Sardones, Taurians, Ossetes, Zygritæ, Ligyes, and Zagylites) may have been of common stock with the old Egyptian race. Herodotus tells us that the Colchians were an Egyptian colony, but perhaps they were really of the stock from which the Egyptian emigrants sprang. However it be, the comparison which he draws shows how strong was the affinity between Egyptians and certain tribes of Asia Minor. Herodotus also believed the statues near Ephesus, which Professor Sayce calls Hittite, to be Egyptian. How if the father of history were right after all? or, at all events, right so far that the character employed was one also used by (if not borrowed from) the Egyptians? A German Professor discovered on the Niobe near Smyrna, only a few months ago the cartouche of Rameses II, and notes the Phœnician-like execution of this Egyptian text.

I must here finally mention what seems to be, perhaps, a strong confirmation of the present suggested theory. Professor Sayce has published a drawing of a silver boss ("Transactions of the Society of Biblical Archæology," Vol. VII, pp. 298, 443), with a Cuneiform and Hittite bilingual. The Cuneiform reads: "Tarrik timme, King of the Country of Erme." The Hittite legend is twice repeated, and consists of only six characters. The one which Professor Sayce considers to be the first is No. 8 of our plate, viz., *Tau*. The one which he considers to be the third is either No. 39 or No. 44 of our plate, and would appear from the Egyptian to be a *Koph*. Here, then, we have in their proper order two letters of Tarak-timme's name; the one between must be the *R*, and is, perhaps, No. 59 of our plate. Perhaps, by aid of Egyptian, we may yet read the rest. The four vertical strokes are common in Hittite, and vertical strokes also occur in hieroglyph.

The Phœnicians have been shown to be the originators of the true alphabetic system, which they developed from the Egyptian cursive hand, according to Professor Isaac Taylor (i, p. 88). The Hamathite stones represent evidently a syllabary, or idiographic forms, or letters with prefixed determinatives. They may fairly be supposed to be older than the introduction of the Semitic alphabet, but they possibly might, in the end, prove to be hieroglyphs, used by early Phœnicians before that alphabet came into use. The *boustrophedon* arrangement is exactly that which the early Greeks obtained with their alphabet from Phœnicia.

All these suggestions I offer, with much diffidence, to the consideration of those who may be able to decipher the Hittite monuments, hoping that the comparison of sixty-one symbols will, even if many are rejected, perhaps prove a basis on which to work, and that we may thus finally become possessed of the secret which these mysterious emblems preserve.

C. R. CONDER, R.E.

CITY OF DAVID.

MR. BIRCH is occupied in nearly every *Quarterly Statement* in exposing the "idle fancies" and "growing error" not only of Captain Conder, but also, at times, of Josephus. He states that it is an "entire mistake" to suppose the word *Matzab* is ever rendered a "pillar," though it is constantly employed of the menhirs of the Canaanites, which are "images" in the English version, but by many authors recognised as equivalent to the *Ansâb* of the pre-Islamite Arabs.

What, may I ask, does Mr. Birch make of the words **אלון מצב** (*Elon Matzab*), rendered "oak of the pillar" in Judges ix, 6?

It cannot be considered that Mr. Birch's case is strengthened by having to postulate that the authority, on whom after all we are obliged mainly to rely, "makes two false statements" or "deliberately altered" an inconvenient statement. I may perhaps be content to be placed by Mr. Birch in the same category with Josephus, and although it appears that I am so constantly inconsistent, I may perhaps be permitted to plead that Mr. Birch has been equally confident that he knows the exact place of the Tombs of the Kings, on more than one occasion, but in very different situations. The same may be said of the Nameless City, and this observation has been made by more readers than myself, so that we are still in doubt what Mr. Birch finally considers to be the truth.

As regards the proposal to recognise the "Tombs of the Kings" in the ancient Jewish sepulchre now called "of Nicodemus," I can only say that the idea has been favourably received by many persons well acquainted with the history of Jerusalem. As regards the "balance of authority" in favour of Aera being west of the Temple, I would say that I do not rely on numbers, but on the character of the authority. I place Robinson Warren, Fergusson, and others whose names may be supposed to carry weight in one scale, and Mr. Birch in the other, and after reading all he has written I incline to give preference to the other view. If David and Solomon did not build a wall round the Upper City, why does Josephus say ("Wars," V, iv, 1) that "the old wall built by David and Solomon began on the north at Hippicus? Is this another false statement, or is Hippicus on the Temple spur, and is the Upper City *post* Herodian? And if they did why should the "City of David" be applied to a hill which was only walled in by later kings?

But leaving aside these questions—for to me it seems that the longer he studies the question of the tombs the more Mr. Birch will find his difficulties increase—I would ask whether he has realised the conclusions to which his theory leads him. The City of David, I understand him to believe, stood south of the Temple. He speaks wrongly of "the hill" on this side, for there is no distinct hill, but part of a narrow sloping spur which falls steadily from the Sakhrah, and has no valley to divide it from the part of the same spur on which the Temple stood. He also, I understand, excludes Ophel from the City of David, though it is not clear

where he supposes Ophel to have been. The Temple itself was, he will admit, outside the City of David, or at all events it was not inhabited. If this be the case his city is only about 10 to 15 acres in area—a population of 600 to 1,000 souls at most, taking even the proportion of any squalid modern village in Palestine, without public buildings, or indeed without any street. In Galilee the ordinary size of a village is 20 acres, and there are many of nearly double that size. Herod's Temple alone occupied 35 acres, and modern Jerusalem 200 acres, within the walls. But Mr. Birch's Jerusalem, or City of David, is only 10 to 15 acres in area, including the "fort," which was the lower city (2 Sam. v, 6), and the citadel itself, which was *not* the lower city (Josephus, "Ant.," VII, iii, 1), unless Josephus makes another false statement. In fact, we have Zion, Moriah, Acra, Ophel, all on one spur within about 10 acres, while the remaining two larger hills and the remaining 190 acres have no names at all! And why? Because Mr. Birch refuses to accept any statement of the ancient accounts which does not agree with his theory.

Was this hamlet the capital of 15,000 square miles of kingdom in the days when Nineveh and Memphis were still inhabited? and if so, at what period of history did Jerusalem grow over the Upper City until it covered 300 acres in all? Not in the troublous latter day of her history surely, when, according to Mr. Birch's view, the "very old wall" of Josephus would seem first to have been built.

C. R. C.

THE SHAPIRA MANUSCRIPTS.

ON the morning of July 20th last, Mr. Shapira called at the Society's office in Adam Street, and informed the Secretary that he had brought to England a manuscript, which if genuine would be certainly considered of inestimable value, being nothing less than a text of the Book of Deuteronomy, written on sheepskin, in characters closely resembling those of the Moabite Stone, and with many and most important variations. He refused to show the documents to the Secretary, but offered to do so if Captain Conder were also invited to be present.

On Tuesday, the 24th, he returned, and, in the presence of Captain Conder and Mr. Walter Besant, he produced the manuscript, and with it an account in writing of the manner in which he acquired it. This account, which he afterwards gave to the officers of the British Museum, was subsequently published in the *Times*, and is as follows:—

"He first heard of the fragment in the middle of July, 1878. A Sheikh, with several Arabs of different tribes, came to him at his place of business in Jerusalem on other matters. The Sheikh had nothing to do with antiquities. They spoke of some little black fragments of writing in the possession of an Arab. They had been found in the neighbourhood of the Arnon. One of the Arabs spoke of them as talismans, smelling of asphalte.

"The day following Shapira was invited to dinner by the Sheikh, and heard more about the fragments. About the year 1865, at a time of persecution, certain Arabs had hid themselves among rocks. There, on the side of a rocky cavern, they found several bundles wrapped in linen. Peeling off the covering they found only black fragments, which they threw away. They were picked up by one of the Arabs, believing them to be talismans. He kept them as such, and became rich, as he thought, in consequence. This was probably ten years or more before Shapira heard of them. Captain Conder knows the exact time. Shapira promised the Sheikh a reward if he would bring to him an Arab he spoke of who would be able to get hold of the fragments. This happened on the day of the dinner. The Sheikh fell ill, and afterwards died.

"About ten or twelve days after the dinner, a man of the Ajayal tribe brought to him a small piece, containing four columns. A few words only were legible. A week after, on Sunday, he brought fourteen or fifteen columns, containing the clearer writing. The next Sunday he brought fourteen or fifteen more columns, in another character of writing, but not all of one form. Ten days after, on Wednesday, he brought three or four columns, very black. Shapira saw nothing more of him.

"After an interval of four or five weeks Shapira wrote to Professor Schlottmann, on the 24th of September; soon after, also, to Dr. Rieu. The writings were (some of them) in better condition than at present. Schlottmann wrote that they were fabrications, and blamed Shapira for calling them a sacred text. He never saw the writings themselves, only Shapira's copy. Schlottmann wrote in similar terms to the Consul at Jerusalem, Baron von Münchhausen, and desired him to prevent Shapira from making the find public. Then Shapira wrote or telegraphed to Dr. Rieu that the writings were forgeries, and that he was to take no steps in respect to them. This he did in consequence of Schlottmann's judgment of them, and the reasons on which it was founded. He placed them in a bank in Jerusalem.

"Subsequently he began to reconsider Schlottmann's objections, and he found that they were partly grounded on mistakes Shapira had made in deciphering the writing. He felt better able to judge of them himself because he had had more experience in manuscripts. It was before Easter of the present year that he re-examined them, and he deciphered them a second time. Professor Schröder, Consul in Beyrout, saw them in the middle of May, 1883, and pronounced them genuine. He wanted to purchase them. Shapira took the writings to Leipzig at the end of July to have them photographed. Professors there saw them. Dr. Hermann believed in them, as did Professor Guthe, who intends to write about them. They had been smeared with asphalte originally as a kind of embalmment oil and spirit. The oil was used by the Arabs to counteract the brittleness, and to prevent their suffering from wet."

Professor Schröder, of Beyrout, has since written to the *Times* denying that he ever pronounced the documents to be genuine.

On Tuesday, the 26th, Mr. Shapira exhibited his manuscripts to a

small party of *savants* at the Society's offices. They were thence taken to the British Museum to be subjected to a closer examination. A translation of the commencement was also published in the *Times*, thus:—

“These be the words which Moses spake according to the mouth of Jehovah unto all the children of Israel in the wilderness beyond the Jordan in the plain. God our God spake unto us in Horeb, saying, Ye have dwelt long enough in this mount. Turn you and take your journey and go to the mount of the Amorites, and unto all the places nigh thereunto, in the plain, in the hills, and in the vale, and by the seaside. And when we departed from Horeb we went through all that great and terrible wilderness, which ye saw; and we came to Kadesh-Barnea. And I said unto you, Ye are come this day unto the mountain of the Amorites. Go ye up and possess ye the land, as said [unto thee the God of thy fathers.] [Notwithstanding] ye would [not] go up. And ye murmured and said, Because [God] hated us . . . to cause us to perish. And God was angry [and sware] saying, As I live, surely all the people that saw my wonders and my signs which I have done these ten times . . . not . . . they have not hearkened unto my voice, they shall not see that good land which I sware to give unto their fathers, save your children and Caleb the son of Jephunneh and Joshua the son of Nun which standeth before thee, they shall go in thither, and unto them will I give it. But as for you, turn you and take your journey into the wilderness by the way of the Red Sea, until all the generation of the men of rebellion shall be wasted out from among the host. [And they abode] in Kadesh-Barnea until the men of rebellion were wasted out by death from amongst the host. . . . Ye are to pass over this day the coast of the children of Esau, which dwell in Seir. Thou shalt not distress them, nor meddle with them in war, for I will not give you of their land any possession, because I have given it unto the children of Esau for a possession. The Horim from of old dwelt therein, and the children of Esau succeeded them, and dwelt in their stead. And we turned and passed the wilderness of Moab. And God said unto me, Ye shall pass over this day the coast of Moab, ye shall not distress them, nor meddle with them in war, for I will not give you of their land any possession, because I have given unto the children of Lot the city for a possession. The giants dwelt therein from of old, and the Moabites called them Amim, but God destroyed them, and they dwelt in their stead. And we turned and passed the brook Zered. And God said unto me [saying], Rise ye up and pass over the river Arnon. This day will I begin to deliver to thy face Sihon the Amorite, King of Heshbon, and his land. And we went forth against Sihon to Jahaz, and we smote him till we left him none to remain. And we took all his cities from Aroer, which is by the brink of the river Arnon, unto Gilead, and unto the brook Jabbok. God our God delivered all unto us. Then we turned and went up the way of the brook Jabbok. And God said unto me, saying, Ye are to pass this day the coast of the land of the children of Ammon. Ye shall not distress them nor meddle with them in war, because I have given unto the children of Lot the land of the children of Ammon for a possession. The

giants dwelt therein from of old, and the Ammonites called them Azam-zummim, but God destroyed them before them, and they dwelt in their stead."

A *fac-simile* of one slip of the manuscripts, containing four columns, was published in the *Athenæum*, with notes by Dr. Ginsburg, on September 8th.

On August 18th, while the skins were under examination at the Muscum, the following letters appeared in the *Academy* :—

"OXFORD,

"August 13th, 1883.

"From the very outset, when I did not as yet know a word of the contents of Mr. Shapira's Moabite Deuteronomy (as I must call it, since it was discovered in the land of Moab, and is reported to be written in characters similar to those on the Moabite Stone), I held it to be a forgery. Mr. Shapira seems to have undergone for the second time the fate that befell him (according to his own statement) in the case of the Moabite pottery which now adorns the Foreign Office at Berlin (the Municipal Museum having refused to accept it). Judging from two inscriptions published by Dr. Schlottmann, of Halle, I then declared in the *Academy* all this pottery to be a modern fabrication. That I was right is now acknowledged on all sides. I am not now going to imitate Professor Kautzsch, who wrote a big book in order to prove the mistakes of grammar and idiom in the inscriptions on the pottery; for this a few instances would have been sufficient, as they will also be in the present case.

"We have now the original text of the Decalogue as contained in the Shapira sheepskins, published by Dr. Ginsburg, with a few remarks, in the last number of the *Athenæum*. Here we find the first two Commandments of the received text fused into one in the Moabite text. There can be no doubt as to this, since each Commandment in the new version concludes with the words, 'I am God, thy God' (I shall have to say a word or two about this apostrophe later on). This is not, however, a new idea; it was already mooted by mediæval Jewish writers. Next we are struck by the ἀπαξ λεγόμενον, יהרתך, 'I liberated thee.' The usual verbs employed for liberating from Egypt and from the house of bondage, in the historical as well as in the prophetic books of the Bible, are either *yatsa* in the Hiphil form (as the received text has it here) or *padah*. The roots *harah* or *hur* are not used as verbs in the Old Testament, but only in the Targumi, and in the Talmud, and then not in the Hiphil form, or with the particle *min*. It is difficult to understand how both texts of the Decalogue, in Exodus as well as in Deuteronomy, should have no trace of such a word, but employ uniformly instead of it the root *yatsa*. In all the other Commandments of the Moabite text, moreover, Israel is addressed in the second person singular; why, then, do we find in the First Commandment 'Ye shall not have,' 'ye shall not bow down?' I shall not say much about the omission of the words 'before me' and the passage beginning 'for I the Lord thy God am a jealous God,' and ending with verse 10. This last passage we shall find in another Commandment of the new text. If, however, we have already found a strange idiomatical

expression, we have as yet come across no grammatical mistake. For this we must wait until we reach the Second Commandment, which refers to the keeping of the Sabbath. It runs thus: 'Sanctify . . . for in six days I have made the heaven and the earth, and all that is therein, and rested the seventh day, therefore rest thou, also thee, and the cattle, and all that thou hast.' **וַיָּשָׁבְתִי**, 'and I rested,' is ungrammatical; it ought to be **וַאֲשַׁבֵּת**. Evidently the Moabite writer did not make use of Dr. Driver's excellent work on the Hebrew tenses. The root *shaboth* does not mean 'to rest,' but 'to cease from work,' and in this sense only it is found in the Old Testament. The forger made a blunder in not leaving the root *noah* as in the received text. The word *gam* ought to be repeated according to classical Hebrew: cf. Exod. xvii, 31, 32, and elsewhere. The expressions 'and all thou hast' and 'anything that is his' are not classical Hebrew. The Fourth Commandment runs thus: 'Thou shalt not murder the person of thy brother.' But this is not Hebrew, as can be seen from the passage *urezaho nefesh* (Deut. xxii, 26). Here a clumsy use has been made of the Chaldee paraphrase. The Fifth Commandment says: 'Thou shalt not commit adultery with the wife of thy neighbour:' cf. Lev. xx, 10. The Sixth Commandment reads: 'Thou shalt not steal the wealth [*not property*] of thy brother.' *Hon* is not to be found in the Pentateuch, the word *hail* being employed there instead of it in the sense of 'wealth.' Now what is the meaning of these paraphrases of the last three Commandments? It is usually supposed that concise texts are the early ones, and paraphrases the later. Why is the word 'brother' employed twice, and the third time 'neighbour?' Is that a slip of the pen? We come now to the Seventh Commandment, the composition of which does no great credit to the author of it. Here we read: 'Thou shalt not swear by my name falsely [Lev. xix 12], for I shall be jealous [Dr. Ginsburg translates 'I visit;'] but can *kanâ* be used in that sense, or is it a misreading?] the iniquity of the fathers upon the children unto the third generation who take my name for a lie' (not 'in vain,' as Dr. Ginsburg renders it). I have already pointed out the strange—I should rather say the impossible—use of the root *kanâ*; but the expression *lenosey* is rabbinical; in classical Hebrew we would expect *laish asher yissa*. The word *eduth*, 'witness,' is equally a rabbinical form. Such is the grammatical and idiomatic character of the new Moabite text of the Decalogue. I will now pass on to some other points. Dr. Ginsburg informs us 'that every Commandment begins a fresh line.' This is a modern idea of writing; in the Siloam Inscription a word even does not end with a line. Dr. Ginsburg goes on to say that the words 'that thy days may be prolonged' (in the Fourth Commandment) are absent on one of the slips, but occur on the duplicate. He adds: 'This is either due to an omission on the part of the scribe, or indicates that it is intended as a different recension.' The account which Mr. Shapira gives of the way he came into possession of his treasure is rather contradictory, and somewhat damaging to the authenticity of the fragments. He says at the end of his letter addressed to Dr. Ginsburg:—

“‘In about twelve days I got [from an Arab near Aroer] four or five columns, with a few Phœnician [?] letters visible upon them; in eight days more he brought me about sixteen beautifully written columns; in eight days more about fifteen, not so well written; in eleven or twelve days more four or five well-written columns; and I have not seen the man again. The Sheikh died soon, and I lost every trace that would enable me to follow the object further.’

“The end of the story is tragical; death sometimes comes when it ought not. But where are these *beautifully* written columns? From the reports in the *Times*, I gather that all the slips are not so easy to decipher. One point more. I have mentioned that the Decalogue begins and ends with the words ‘I am God [*Elohim*, not *Jehovah*, Lord], thy God,’ and that at the end of every Commandment these words occur again. This is certainly the cleverest thing in the new Deuteronomy, as it turns the fragments into an Elohist text. (Dr. Ginsburg, by the way, states from memory that the expression אלהים אלהיך, ‘God thy God,’ does not occur in the Old Testament. It does, however, occur in the Elohist Psalms, xlv, 8 and l, 7. The last quotation might have served as a model for the new Decalogue.) Unfortunately, the Moabite Moses has blundered at the very beginning of the book by using the following words:—‘These be the words which Moses spake according to the mouth of *Jehovah*’ (so, at least, we read in the translation given in the *Times*). The rest of the chapter has only *Elohim*. This and the following chapters of the new Deuteronomy might be criticised with as damaging an effect as the Decalogue, but it is not worth our while to do so; *ab uno disce omnia*. The omissions and the additions in this part are made without even a superficial knowledge of the results of modern criticism. I shall only point out one oversight: i, 9 of the new text reads ‘because I have given unto the children of Lot the city for a possession.’ Instead of *city* the Authorised Version has *Ar*. The new text must consequently have עיר instead of ער. Now in the Decalogue, as well as upon the Moabite Stone (for the *scriptio* of דיבן, Dibbon, Dr. Nöldeke rightly suggests that it was most probably pronounced *Daybon*), and also in the Siloam inscription, the *scriptio defectiva* is general; how, then, does it happen that עיר is written *plene*? Is it a slip of the pen again? I give my opinion on this grave question without being able to take any notice of the palæography of the sheepskins. But I am certainly not very anxious to study the ‘beautifully written columns’ of the new Moabite scribe, as I am convinced from the text itself that the whole is a forgery.

“A. NEUBAUER.”

“QUEEN’S COLLEGE, OXFORD,

“August 13th, 1883.

“We learn from the *Times*, as well as from Dr. Ginsburg’s communications to the *Athenæum*, that the fragments of the Book of Deuteronomy which Mr. Shapira has brought to England are written in characters

resembling those of the Moabite Stone. Now the discovery of the Siloam inscription has shown that these were not the characters used in Judah (and therefore presumably in the northern kingdom of Israel) in the pre-exilic period. Consequently, if the fragments were genuine, they would belong to a Moabite and not to a Jewish Book of Deuteronomy, and the opening verse of the book would contain the name of Chemosh, and not of Yahveh or Jehovah.

"It is really demanding too much of Western credulity to ask us to believe that in a damp climate like that of Palestine any sheepskins could have lasted for nearly 3,000 years, either above ground or under ground, even though they may have been abundantly salted with asphalt from the Vale of Siddim itself.

"A. H. SAYCE."

On August the 21st, M. Clermont-Ganneau's letter, written on the 18th, appeared in the *Times*, and on the same day Captain Conder's letter of the same date.

"I reached London on Wednesday last, instructed by the Minister of Public Instruction in France with a special mission to examine Mr. Shapira's manuscripts, at present deposited in the British Museum, and which have, for some time past, excited such great interest in England.

"My studies of the stone of Mesha, or 'Moabite Stone,' which I conveyed to the Louvre, and re-constructed in its entirety, my decisive disclosures with regard to the fabrication of spurious Moabite potteries, purchased by Germany, and my labours in connection with Semitic inscriptions generally, gave me, I ventured to think, some authority upon the question, and caused me to hope that the favour would be shown to me, which was accorded to other scholars, and to persons of distinction, of making me acquainted with these documents, which, if they should prove to be authentic, would unquestionably be of incalculable value.

"I will not conceal the fact that I entertained, in advance, most serious doubts as to their authenticity, and that I came here in order to settle these doubts. But I thought it my duty to pronounce no opinion until I had seen the originals.

"As soon as I had arrived I went to the British Museum, where my learned and obliging friend, Dr. S. Birch, was kind enough to introduce me to Dr. Ginsburg, whom I found in the Manuscript Department, engaged in studying the fragments, in company with Mr. Shapira. Dr. Ginsburg was good enough to allow me to glance at two or three of the fragments which were before him, and postponed until the next day but one (Friday) a more extended examination. He showed, however, some degree of hesitation, and finally expressed himself as uncertain whether it would be convenient or not to submit the fragments to me. It was agreed that I should have a decisive answer on Friday. I fancied that Dr. Ginsburg feared some encroachment on my part, in the matter of the priority of publication of a text which he has deciphered with a zeal which I am

happy to acknowledge, and which he has had the honour of first laying before the public. I endeavoured to reassure him in this respect, by informing him that I only wished to concern myself with the external and material state of the fragments; that I should examine them exclusively with this object in view, in his very presence; and that I was ready to bind myself to refrain from examining the text, properly so called, and from publishing anything whatsoever on the contents of the fragments.

"On Friday I went again to the British Museum, and Mr. Bond, the principal librarian, informed me, in the presence of my distinguished friend Mr. Newton, that he could not, to his great regret, submit the fragments to me, their owner, Mr. Shapira, having expressly refused his consent. There was nothing to be said against this; the owner was free to act as he pleased. It was his strict right, but it is also my right to record publicly this refusal, quite personal to me; and this to some extent is the cause of this communication. I leave to public opinion the business of explaining this refusal. I will confine myself to recalling one fact, with comment. It was Mr. Shapira who sold the spurious Moabite potteries to Germany; and it was M. Clermont-Ganneau who, ten years ago, discovered and established the apocryphal nature of them.

"In these circumstances, the object of my mission became extremely difficult to attain, and I almost despaired of it. I did not, however, lose courage, and I set to work with the meagre means of information which were at my disposal:—(1) The hasty inspection of two or three pieces which M. Ginsburg had allowed me to handle for a few minutes on my first visit; (2) the examination of two fragments exposed to public view in a glass case in the Manuscript Department of the British Museum—a case very ill-lighted and difficult of approach, owing to the crowd of the curious pressing round these venerable relics. I devoted to this unpleasant task both Friday and Saturday, and had the satisfaction of obtaining an unhopèd-for result. These are my conclusions:—

"The fragments are the work of a modern forger. This is not the expression of an *à priori* incredulity, a feeling which many scholars must, like me, have experienced at the mere announcement of this wonderful discovery. I am able to show, with the documents before me, how the forger went to work. He took one of those large synagogue rolls of leather, containing the Pentateuch, written in the square Hebrew character, and perhaps dating back two or three centuries—rolls which Mr. Shapira must be well acquainted with, for he deals in them, and has sold to several of the public libraries of England sundry copies of them, obtained from the existing synagogues of Judea and of Yemen.

"The forger then cut off the lower edge of this roll—that which offered him the widest surface. He obtained in this way some narrow strips of leather with an appearance of comparative antiquity, which was still further heightened by the use of the proper chemical agents. On these strips of leather he wrote with ink, making use of the alphabet of the Moabite Stone, and introducing such 'various readings' as fancy dictated, the passages from Deuteronomy which have been deciphered and trans-

lated by M. Ginsburg, with patience and learning worthy of better employment.

"That which put me on the scent was the presence—ascertained by me at first sight—on the fragments of an important detail, of which I had not at first understood the full significance. The lines of Moabitish writing are arranged in the shape of columns, separated by vertical creases in the leather—that is to say, by creases perpendicular to the general direction of writing. On the right and left of each of these folds I had noticed two vertical straight lines, drawn with a hard point, as guides for the vertical margins, starting from the upper edge of the strip, and extending to the lower edge, which they do not always reach. The Moabitish forger had not paid much attention to these extremely fine lines, which have scratched the leather in an almost invisible but indelible manner; and the lines of Moabitish characters, instead of being confined by this drawing, have no relation to it. Sometimes they pass over the lines, sometimes they rest on the inner sides of them, both at their beginning and ending. The forger was obviously guided in observing the limits of his space, not by the vertical marginal lines, but by the intermediary creases. If, however, we compare these strips of leather with one of the synagogue rolls of which I spoke just now, the explanation of this mystery will be made plain to us at once.

"These rolls consist of large pieces of leather (generally sheepskin) sewn end to end, forming enormous strips, which may be 30 or 40 metres in length, and with a breadth of 16 centimetres or more.

"The text of the Pentateuch, in the square Hebrew characters, is arranged in regular parallel columns containing some fifty lines each. At the top a horizontal margin is left, and at the bottom another horizontal margin, everywhere wider than the upper one, both extending for the entire length of the roll. This lower margin, to take an example, on a roll in the British Museum coming from Jerusalem and bearing the number 1460, measures 8 centimetres in height. The columns of the text separated by intervals, which, in the roll instanced by me by way of comparison, measure about 4 centimetres, are marked out with the stylus. The horizontal marks along which the square Hebrew characters are brought into line are confined on the right and left by two long vertical lines, traced in the same manner, which, for the most part, cross the first and the last horizontal line, and jut out into the upper and lower margin. This is not all. Between each column and the next one, the leather has a vertical crease which runs from top to bottom of the roll. It is these ends of the vertical lines drawn with the stylus and the peculiar creases which divide them which we meet with on the long narrow Moabitish strips whereon the forger has written his Moabitish characters.

"There is more yet. I have said that the large pieces of leather of the synagogue rolls were sewn end to end. Now, among the Moabitish strips, I saw at least one where this seam still exists. I need not point out how interesting it would be to examine the character of the thread. Finally, one sees that on the Moabitish strips one of the two edges, either the upper or the lower, is fringed and ragged. It is the original lower edge

of the roll which furnished the raw material to the forger. The second edge, on the other hand, is sharply cut with a penknife or scissors ; it is the cutting made by the forger immediately under the last line of the square Hebrew characters.

"I advise all the impartial scholars who would thoroughly inform themselves as to this gross imposition, and to whom may be permitted an examination which is denied to me (I know not, or rather, I know very well why), to take the suspected strips, and to lay them against the lower edge of one of the synagogue rolls preserved at the British Museum. The trick will stare them in the face. I will also beg my more favoured fellow students to be kind enough, in order to throw complete light upon a problem (which is no longer one to me), to make certain important investigations, especially the following :—

"(1) To ascertain whether, by chance, there does not remain on the upper portion of the strips traces of the tails of the square Hebrew letters, especially of the final letters which, as we know, descend below the normal line.

"(2) To see if the back of the leather does not materially differ in appearance from the face of it, and whether it has not been left in the raw state, as on the synagogue rolls.

"(3) To take the average height of all the strips, in order to obtain from them the greatest height, which will enable us to determine the height of the original margin of the roll (or the rolls) that supplied the forger. I can at once affirm that on this roll the columns of square Hebrew characters were from 10 to 11 centimètres in breadth, and were separated by blank intervals of about $4\frac{1}{2}$ centimètres in breadth.

"(4) To ascertain the description of leather, and above all of the thread in the seams.

"Nothing is more easy than to effect the experimental examination which I suggest. Let there be given me a synagogue roll, two or three centuries old, with permission to cut it up. I engage to procure from it strips in every respect similar to the Moabitish strips, and to transcribe upon them in archaic characters the text of Leviticus, for example, or of Numbers. This would make a fitting sequel to the Deuteronomy of Mr. Shapira, but would have the slight advantage over it of not costing quite a million sterling.

"Who is the forger? That is a question which it does not concern me to answer, nor even to raise. I will merely call attention to the fact that he can only be a person familiar with Hebrew, and who has had before his eyes exact copies of the Moabite Stone.

"One word in conclusion. It would be interesting to learn whether the forger has completely destroyed the synagogue roll from which he has cut the strips required for the imposition. Certainly elementary prudence would have required the annihilation of this *corpus delicti*. Nevertheless, the Hebrew text remaining intact, after the abstraction of the lower margin, and these synagogue rolls having a fixed market value, it is not impossible, although it would have been at a serious risk, that the forger

should have tried to make something by it, and to 'kill two birds with one stone.' If ever a synagogue roll should be met with without a lower margin, it will be well to try if, by chance, the Moabitish strips would not fit it.

"CLERMONT-GANNEAU."

"42, Great Russell Street, August 18."

"To the Editor of the *"Times."*"

"Sir,—As my name has been mentioned in a letter published in the *Times* concerning this manuscript, I should be glad to be allowed to make a few remarks on the subject. I have no remembrance of having seen the fragments in question before they came to London, but have since had an opportunity of examining them, and, after comparing them with other manuscripts, true and forged, which I have seen in the East, I had no hesitation in concluding that the supposed fragments of Deuteronomy were deliberate forgeries. During the course of my visits to Moab in 1881–2, I had frequent conversations with the Bedawin concerning the Moabite Stone and other antiquities, and I collected four Nabathean texts, which are shortly to be published. I never heard any Arab speak of the supposed find of Mr. Shapira's manuscript, but what I did hear from all the Arabs was that persons from Jerusalem had buried pottery in Moab, which they afterwards dug up in the presence of Europeans, and represented to be ancient. They showed me the places where these articles were buried, and named the persons concerned. The pottery in question was pronounced in 1873–4 by English and French *savants* to be forged. The alphabet of the pottery inscriptions was the same as that of the present manuscript, save for the introduction in the former of Himyaritic letters among the Phœnician forms. Some fragments of similar pottery have been shown to me by Mr. Shapira, and I understood that the Arabs represented these as having been found with the manuscript.

"Forgeries of coins, inscriptions, and manuscripts are common in Jerusalem, Nâblus, Beyrout, Sidon, &c., and are often attributed to the poorer class of Jewish adventurers in those towns. In the present instance, it would be satisfactory to know the name of the tribe which discovered the manuscript. The only name yet given is that of Sheikh Mahmûd Arekat, who is not a Bedawin chief, but only a fellah chief of Abu Dis, near Jerusalem. The names of the Moabite chiefs and tribes I have carefully ascertained, and could say whether the district east of Aroer on Arnon belongs to any one of them or not.

"The use of square Hebrew by the Jews we have now traced in Palestine to a period earlier than the Christian era, and we know that the Pahnnyrenes and other trans-Jordanic peoples were using a similar alphabet about that time. The manuscript under consideration is therefore (if it be genuine) more than 2,000 years old. I do not think any archæologist will suppose that leather, as limp and supple as that on which this manuscript is written, could exist for such a length of time in the damp atmosphere of a country

which has a rainfall of 20 inches. Having explored many hundreds of caves and tombs, I know well the mouldy smell of such excavations, and the rapid decay of frescoes not more than 600 years old on their walls. We know that the Accadians and Assyrians used papyrus and parchment, but not a fragment of their books is known to remain. The tattered fragments of our oldest Hebrew manuscript are not older than the seventh century A.D., and the condition of the famous oldest Samaritan roll at Shechem (a document which I have three times examined, and which, from the character of its letters, is not older than, perhaps, the sixth century A.D.) contrasts in an extraordinary manner with that of Mr. Shapira's leather leaves, supposed to be at least 1,400 years older, as does the faded colour of the letters with the very distinct black ink of the Shapira manuscript. It is only in the dry, rainless Theban desert that really ancient papyri (some 3,000 to 4,000 years old) have been found, or are likely to have survived, and the condition of such papyri before they are unrolled is very different from that of the supple leather of the new manuscript, which, however, is not unlike the forged manuscripts which have been offered for sale at Nâblus. It is quite a misnomer to speak of Mr. Shapira's leaves as embalmed, although they are said to have been found with a mummy.

"As regards the same mummy, I would ask, finally, whether this assertion alone is not sufficiently suspicious. Exploration has shown us that the Jews, the Israelites, and the Phœnicians never mummified the dead. Their tombs are not constructed to contain mummy cases. East of Jordan the survey party found that the Moabites used the same tombs as the Jews, and even smaller chambers in rocks. We should be forced, then, to conclude that an Egyptian was buried in the Moabite desert, after being converted to Judaism by some unknown sect, who wrote in the Dibon alphabet, and not in that of Western Palestine, as now known in the Siloam Inscription. A more improbable set of assumptions could hardly be conceived, yet the difficulty of the great age which it is necessary to suppose leather to be able to attain without rotting in a damp cave is even more fatal to this clever forgery.

"CLAUDE R. CONDER, R.E."

"*Guildford, Aug. 18.*"

On the 25th another note from M. Clermont-Ganneau was published, giving a diagram showing the folds of the skin, the sutures, &c.

Lastly, the following paper on the subject, written by Dr. Ginsburg to Dr. Bond, of the British Museum, was published in the *Times* of August 27th. It has only to be added that it is now said that the German Professors in Berlin to whom Shapira showed the skins, immediately discovered that the writing was a forgery. That may be so, but no one thought fit to publish his opinion until there was no longer any doubt on the subject existing among English scholars.

“August 22, 1883.

“The manuscript of Deuteronomy which Mr. Shapira submitted to us for examination is a forgery.

“As the interest which it has excited is so great, and as the public are waiting to hear the result of our investigation, I shall endeavour to give my reasons for the conclusion I arrived at in as popular a manner as the essentially technical nature of the subject will admit.

“The writing of the manuscript exhibits the oldest alphabetical characters hitherto known. The letters greatly resemble those on the Moabite Stone, *circa* B.C. 900. The document, therefore, pretends to be about B.C. 800–900. This conclusion cannot be set aside by the supposition that extremely archaic forms may have been retained in some districts, either in the east or west of the Jordan, and that the manuscript may therefore only claim to be of about B.C. 200–300. The pretence to extreme antiquity is confirmed by the fact that the text of Deuteronomy in its present form was substantially the same *circa* B.C. 300. This is attested by the Septuagint version of the Pentateuch, which, as is generally admitted, was made about that time. As the Shapira manuscript pretends to give an entirely different recension, it presumably claims to exhibit a text prior to B.C. 300.

“The evidence which to my mind convicts the manuscript as a modern forgery is of a twofold nature—viz., external and internal.

“I. The narrow slips of leather on which it is written are cut off from the margin of synagogue scrolls. According to an ancient practice, the Jews in all parts of the world read the Sabbatical lessons from the Pentateuch from manuscript scrolls. Owing to partial defacement or damage, these scrolls frequently become illegal, and are withdrawn from public use. And although the Jews as a rule guard these sacred relics against profanation, and deposit them in receptacles abutting on the synagogues, still the communities in the East, and especially in South Arabia, are driven by poverty to part with them. Hence almost every public library in Europe, and many private collectors, possess such disused parchments or skins belonging to different ages, ranging from the eleventh to the nineteenth century. On the 24th of November, 1877, the British Museum bought a number of these scrolls from Mr. Shapira, which he brought from Yemen. The remarkable part about these scrolls is that (1) some of them are written on similar rough sheepskins to the material on which the Deuteronomy slips are written; (2) the lower margin of some of these scrolls (Comp. Oriental, 1452; Oriental, 1453; Oriental, 1454; Oriental, 1459; Oriental, 1465) is the same width as the height of the Shapira slips; and (3) one of these scrolls—viz., Oriental, 1457, has actually such a cut-off slip fastened to the beginning of Genesis—and this scroll was bought from Mr. Shapira in 1877, the very year in which he declares that he obtained the inscribed slips.

“II. The columns of these scrolls are bounded on the right and left by vertical lines drawn with a hard point. These lines not only extend from the top to the bottom of the written portion, but reach to the very end of

the leather, right across the upper and lower margins. Now, the Shapira fragments exhibit these lines with the dry point, but not as boundaries to the margin, for the writing on them extends on each side beyond the lines, thus confirming the theory that they originally formed the ruled margins of legally written scrolls. What is still more remarkable is the fact that the uninscribed slip already mentioned has also these guiding lines, and that they correspond to the inscribed Shapira fragments.

"III. The upper and lower margins are very rough, ragged, and worn in the old scrolls, as will be seen in scroll Oriental, 1456, and Oriental, 1457. Now, many of the Shapira slips are only ragged at the bottom, but straight at the top, thus plainly showing that they have been comparatively recently cut off from the scrolls, since they have not had time to become ragged at the top.

"IV. Some of the slips show plainly that they have been covered by a frame which inclosed the writing, and that this frame was filled with chemical agents. The result of this is to be seen in the fact that, while the inscribed part has thereby been rendered perfectly black and shiny, the part of the leather covered by the frame is of a different and fresher colour, and exhibits the shape of the frame.

"As to the internal evidence, it will be seen from the following analysis of the documents that there were no less than four or five different persons engaged in the production of the forgery, and that the compiler of the Hebrew text was a Polish, Russian, or German Jew, or one who had learned Hebrew in the North of Europe.

"I. Taking for granted that because the canonical text already contains two recensions of the Decalogue, no insurmountable objection would be raised against a third recension, provided it exhibited the Biblical precepts, the forger manifestly made the Ten Commandments the groundwork of his text. Accordingly, he not only modelled the Decalogue after the pattern of Leviticus xviii and xix, but derived his additions from those chapters. Thus the refrain 'I am God thy God,' which he inserted ten times, is simply a variation of the longer refrain 'I am the Lord your God,' which occurs exactly ten times at the end of ten precepts or groups of precepts in Leviticus (xviii, 2, 4, 30 ; xix, 2, 3, 4, 10, 25, 31, 34). Again, what is here the Seventh Commandment is made up from Leviticus xix, 12, while the additional Tenth Commandment is simply Leviticus xix, 17.

"II. Though Deuteronomy xxvii, 11-14 orders that the representatives of the twelve tribes are to place themselves on Mount Gerizim and Mount Ebal, in order to recite the blessings and the curses for the observance and the transgression of certain precepts, yet the maledictions only are given (verses 15-26). This manifestly suggested to the forger the idea of supplying the benedictions. In accordance with his plan, therefore, he not only filled up the gap with ten beatitudes, but made these ten benedictions harmonise with his version of the Ten Commandments.

"III. Equally manifest is his design in altering the maledictions contained in the canonical text of Deuteronomy xxvii, 15-26. The additions,

omissions, and insertions in the Shapira slips are palpably so framed as to yield ten maledictions to range round the Ten Commandments according to the forger's version of them.

"To impart to the document the appearance of antiquity, the forger not only imitated closely the archaic writing of the inscription on the Moabite Stone, but adopted the expressions which are to be found on this lapidary document. Thus, for instance, in the Decalogue, which, as I have already shown, forms the central point of the forged text, the forger not only separated the words, but put a full stop after every expression, exactly as it is on the Moabite Stone; the only exceptions being the particles *eth*, which is the sign of the accusative, and *lo*, which is the negative. That the forger used the Moabite Inscription as a model is, moreover, to be seen from the following facts. He exchanged the word rendered 'before time' in the Authorised Version (Deut. ii, 12) for the word *meolam*—'from of old,' because it occurs in this ancient inscription. Again, in describing the Moabite territory, the forger mentions Moab, Aroer, Jahaz, and the Arnon, because these four names are to be found on the Moabite Stone; but he omits Paran, Tophel, Laban, Hazeroth, and Dizahab (which occur in Deut. i, 1) simply because they are not to be found in the Moabite Inscription.

"V. My reason for concluding that the compiler of the text was a Jew from the North of Europe is that certain errors in spelling which occur in this document can only be accounted for on this hypothesis. Thus the Jews in Poland, Russia, and Germany pronounce the undageshed *caph* and the gattural letter *cheth* alike. Hence, when the compiler of the text dictated to the scribe the word *chebel*, the latter spelled it *kebel*, with *caph*; and *vice versâ*, when the compiler told him to write the expression which denotes 'of their drink-offerings,' and which is written with *caph*, the copyist spelled it with *cheth*. In the North of Europe, moreover, the Jews pronounce alike the letters *teth* and *tau*. This accounts for the otherwise inexplicable spelling in this document of the word rendered 'frontlets' in our Authorised Version.

"VI. The compiler of the text, who was a tolerable adept in writing Hebrew, could not have been familiar with the Phœnician characters exhibited in these slips, or he would assuredly have read over the transcript and have detected those errors. He would especially have noticed the transposition of the two letters in the predicate applied to God, which, instead of saying He was 'angry,' declares that He 'committed adultery.'

"From the fact that the slips exhibit two distinct hand-writings, I conclude that there were two scribes employed in copying them. These, with the compiler of the Hebrew text and the chemist who manipulated the slips, account for my remark that there were four or five persons engaged in the forgery.

"CHRISTIAN D. GINSBURG."

THE SILOAM INSCRIPTION.

I HAVE allowed two years to pass without writing again on the Siloam Inscription, partly because it was being well looked after by German scholars, partly also from want of leisure. Thanks to the labours of Dr. Guthe the text of it is now as fairly established as it ever will be, and the casts that are in Europe permit it to be examined with that minute care which the actual position of the inscription makes almost impossible. I must begin by formally retracting my objections to the readings **אמת** and **במאתים** in the second and fifth lines which I urged two years ago. The casts leave no doubt that I was wrong, and Dr. Guthe right. In most other points I agree with the readings and interpretation of the German scholars, as embodied in Dr. Guthe's article in the "*Zeitschrift der Deutschen Morgenländischen Gesellschaft*," xxxvi, 3, 4. I should now, therefore, give the following translation of the text :—

1. "(Behold) the excavation! Now this had been the history of the excavation. While the workmen were still lifting up
2. "the axe, each towards his neighbour, and while three cubits still remained to (cut through), (each heard) the voice of the other who called
3. "to his neighbour since there was an excess in the rock on the right hand and on (the left). And on the day of the
4. "excavation the workmen struck, each to meet his neighbour, axe against axe, and there flowed
5. "the waters from the spring to the pool for a thousand two hundred cubits; and . . .
6. "of a cubit was the height of the rock over the heads of the workmen."

The most curious thing about the inscription is the absence in it of any proper name. The name neither of the king who caused the tunnel to be made, nor of the engineer who executed the work, is mentioned. The omission is rendered all the more curious by the fact that the upper part of the tablet in which the inscription is engraved is left bare, the inscription beginning about half-way down—in fact, just where it would be concealed by the water. There seems only one possible explanation of strange a circumstance. There must have been an official quarrel, and the engineer, naturally desirous of commemorating the feat he had performed, engraved the record of it in a place where it would not be discovered. At the same time I do not understand why he should not have recorded his own name.

The question as to the date of the inscription is no nearer settlement than it was two years ago. It is pretty well agreed now that no argument can be derived from the form of the letters—except in so far as they prove that the inscription is older than the middle of the sixth century, B.C.,—since we have no early Hebrew monuments with which to compare

them. The question must be decided on historical, and not on palæographical grounds.

Now we gather from the Books of Kings and Chronicles that there were only two building periods in the pre-exilic history of Jerusalem—those, namely, of Solomon and Hezekiah. The majority of those who have commented on the inscription ascribe it to the age of Hezekiah; I am still inclined, with hesitation, to assign it to the age of Solomon. Canon Birch, in the last number but one of the *Quarterly Statement*, seems to think that the matter can be easily disposed of by a simple reference to the fact that 2 Kings xx, 20, speaks of “the pool,” and “the conduit.” But there is all the difference in the world between referring to “the pool” and “the conduit” which Hezekiah made, and the statement of the inscription that the waters flowed “from the spring to the pool.” Here “the pool” is correlated to “the spring,” or “exit,” and no one, I suppose, will assert that there was more than one spring. Moreover, the word translated “conduit” is תעלה, which is not the same as the נקבה, or “tunnel,” of the inscription. On the other hand, the passage in Kings goes on to add that Hezekiah “brought the water to (not into) the city,” which the chronicler (2 Chron. xxxii, 30) supplements by saying that it was “directed downwards on the west side of the city of David,” after that the “exit,” or “spring of the waters of the upper Gihon,” had been sealed up. This would exactly suit the position of the Pool of Siloam.

It would also suit, though not so well, the tunnel discovered by Colonel Warren, which leads, like the Siloam Tunnel, into the Virgin's Spring. This second tunnel ends in a perpendicular shaft, which communicates with another subterranean passage, partly sloping, partly horizontal, the whole terminating in a flight of steps in a vaulted chamber cut out of the rock. The Roman lamps and other relics found in the chamber and passage show that the tunnel was used by the inhabitants for obtaining water up to a late period. Now this second tunnel best suits the verb “he directed,” employed by the chronicler, whereas the adverb “downwards” applies naturally to the Siloam conduit.

It must, however, be remembered that this second tunnel is, in connection with the Siloam one, a perpendicular shaft descending to the latter below the vaulted chamber, and appears, therefore, to be of later origin. The overflow of the water in it, in fact, must have made its way through the Siloam aqueduct into the Siloam Pool. It is obviously to this tunnel that we should have to apply the passage in Kings if it stood alone.

Whatever, however, may be thought of the statements in the Books of Kings and Chronicles, I do not see how it is possible to explain away the words of Isaiah, who writes of the topography of Jerusalem, not as it existed some centuries earlier, but as it was in his own day. What Mr. Birch means by a “newly-found aqueduct,” in addition to the Siloam Tunnel, I fail to comprehend any more than Captain Conder, “since,” as the latter remarks, “there is but one aqueduct from the Virgin's Fountain to Siloam—that, namely, in which the inscription is engraved.” Now in

a prophecy delivered during the reign of Ahaz, Isaiah (viii, 6) contrasts the waters of Shiloah, that go softly," with the Euphrates (or rather Tigris). Unless the Kidron is referred to, only the Siloam Tunnel can be meant, since there was no other "softly-flowing" watercourse in or near Jerusalem. And that the Kidron is not referred to is shown partly by the epithet given to the waters, partly by the name Shiloah, which signifies an artificial aqueduct. But this passage does not stand alone. In Isaiah vii, 3, the prophet states that he was directed to meet Ahaz "at the end of the conduit of the Upper Pool, in the highway of the fuller's field." Now the topography of Jerusalem makes it clear that the fuller's field could have been only at the southern entrance into the Tyropœon valley, where water for fulling could be obtained from the Kidron and En-rogel, the modern Bîr Eyyub, as well as a strip of level ground. This is fully confirmed by the name of En-rogel, "the fuller's fountain." Consequently, on the road from the city towards En-rogel, a conduit must have led from an upper pool into a lower one, which is called the Lower Pool in Isaiah xxii, 9. This conduit can only be the rock-cut channel which still leads from the Pool of Siloam into the old reservoir below. As Isaiah, in the passage just quoted, ascribes the construction of the Lower Pool to Hezekiah, I am inclined to think that this is really the reservoir referred to in 2 Kings xx, 20, and that the chronicler has confused "the exit of the waters of the upper Gihon," or "spring," from which the water originally came, with the Upper Pool of Siloam. It is, however, possible that he merely means to say that Hezekiah, after sealing up the Virgin's Spring, lengthened the channel through which its waters were conveyed into the city, and so "directed them downwards on the west side of the city of David." Perhaps, indeed, this is the most natural interpretation of his words. Dr. Guthe has discovered the remains of four other old reservoirs in the neighbourhood of the Pool of Siloam, all of which may have been supplied with water from the Siloam Tunnel. If these had existed, or, indeed, if only the Lower Pool had existed at the time the inscription was written, it is difficult to understand how the Siloam Pool could have been termed "*the pool*." In fact, if the reservoirs discovered by Dr. Guthe were supplied with the refuse-water of the Upper Pool, as the Lower Pool certainly was, the Upper Pool must have been the first of them that was made.

My conclusions are, then, the following. The passage in 2 Kings xx, 20, applies most naturally to Colonel Warren's tunnel. That in 2 Chronicles xxxii, 30, must be interpreted of the Lower Pool of Siloam. The contemporary references of Isaiah (vii, 3 ; viii, 6 ; xxii, 9) apply only to the Siloam Tunnel, the Siloam Pool, and the Lower Pool, which was repaired by Hezekiah, who changed it from a rain-water cistern into a reservoir supplied with water from the Siloam Tunnel.¹ The Siloam Tunnel must consequently have been in existence before the time of Ahaz, and since

¹ I do not see what other sense can be attached to the expression, "ye collected the waters." Besides, an Upper Pool already existed in the time of Ahaz (Isa. vii, 3).

the only great builder known to the Books of Kings before that epoch was Solomon, we are justified in ascribing the construction of it to him. After all, this conclusion is only in harmony with probabilities. When Solomon was executing great public works in Jerusalem, and completing its fortifications, it is hardly likely that he would have allowed his capital to depend only upon rain-water in time of siege. Dr. Guthe has pointed out that, according to the Septuagint, Solomon "cut through the city of David."

Why then, it will be asked, is no mention made of the excavation of the conduit among the other works of Solomon? I will reply by asking another question: Why is it that no king is mentioned in the Siloam Inscription? The answer in each case must be the same—there had been an official quarrel, and the fame of the engineer who "cut through the city of David" was not allowed to go down to posterity.

I can see only one valid objection to the conclusion at which I have arrived. Solomon's workmen were Phœnicians, and nevertheless the Siloam Inscription is in the purest Hebrew. But it must be remembered that it was only Hiram, the brassfounder, and the Sidonian hewers of timber that came from Phœnicia; the stonecutters were partly Tyrians and Gebalites, partly Hebrews (1 Kings v, 18).

Whether or not, however, the Siloam inscription can be assigned to a precise chronological period, it has, I believe, thrown most important light on the topography of pre-exilic Jerusalem. Mr. Birch seems to me indubitably right in holding that the city of David stood on the so-called hill of Ophel. In fact no other view is now possible. But it further follows from this that the Tyropœon valley was the valley of the son of Hinnom. This will explain why the older name of the Tyropœon has never hitherto been discovered, and it will also explain why the tombs of the Jewish kings have not been found. They lie concealed under the rubbish that covers the southern slope of Ophel. If we are to discover the relics of royal Jerusalem we must excavate the Tyropœon valley, at the bottom of which probably lie the ruins that were thrown into it by the soldiers of Nebuchadnezzar.¹

The hill on which the city of David stood was the original Mount Zion, a name which was afterwards extended to the Temple-hill, the proper designation of which seems to have been Moriah (or Moreh?); see 2 Chronicles iii, 1; Genesis xxii, 2, 14. Here I believe to have been the city of Jebus. At all events, the proverb quoted in 2 Samuel v, 8—"the blind and the lame shall not enter the temple"—implies that the

¹ The determination of the position of the valley of the son of Hinnom settles that of "the mountain that is over against the valley of Hinnom westward, which is at the end of the valley of Rephaim northward" (Josh. xv, 8; xviii, 16). This mountain is either Bezetha, or that on which the Church of the Holy Sepulchre stands, or that to the south of it, which has been erroneously identified with Zion. It is more probably the last. Professor Robertson Smith has already pointed out in the "Encyclopædia Britannica" that the valley of the son of Hinnom must be represented by the Tyropœon.

Jebusites, whose city was stormed, inhabited the higher Temple-hill. David had already that day taken "the stronghold of Zion" on the lower hill.¹ This stronghold was merely an outpost, or isolated tower, and it was accordingly on the lower uninhabited hill that David built his new city, named in consequence "the city of David." The Jebusites still continued to live on the higher hill of Moriah, as we may infer from the fact that Araunah had his private threshing-floor there towards the close of David's reign. This will explain why we find so many cisterns on the area of the Harám. When Solomon swept away the houses of the old Jebusite city to make room for his palaces and the temple, he reduced their inhabitants to a state of serfdom (1 Kings ix, 20, 21), and transferred them, under the name of Nethinim, or "Temple-servants," to Ophel, the north-eastern portion of Mount Zion (see Nehemiah iii, 26, 31).² Between Moriah and Zion Dr. Guthe has found traces of an old valley which opened into the valley of the Kidron, not far from the Virgin's Spring. Here must have been the two walls between which Hezekiah made the "gathering-place," or tank, "for the water of the old pool" (Isa. xxii, 11), and here, too, was the gate through which Zedekiah fled along the valley of the son of Hinnom, "by the way of the king's garden," past En-rogel and Mar-Saba, to the plain of Jericho (Jer. xxxix, 4; lli, 7). This gate was probably the "Potteries' Gate" of Jeremiah xix, 2.

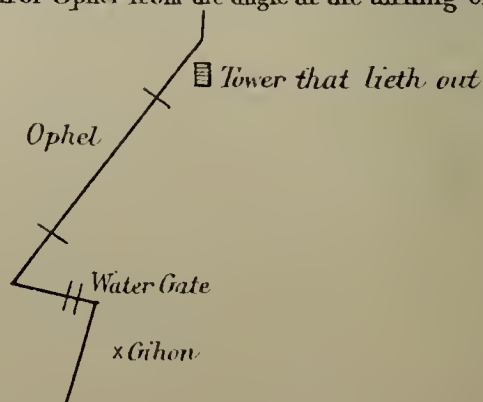
The enclosure of Moriah and Zion within a single wall created the city of Jerusalem. The name is written *Ur-salímu*, or "city of peace," in the Assyrian inscriptions, which goes to show that those scholars are right who have supposed the name to signify "the peaceful town," in spite of

¹ *Mětsudháh* and *mětsádih* are always used of isolated forts, situated in uninhabited spots. That Jebus, or the city of the Jebusites, occupied Moriah is further indicated in Joshua xv, 8 (and xviii, 16), where we read that "the border went up by the valley of the son of Hinnom to the shoulder of the Jebusite from the south; that is, Jerusalem." The "south" is explained by the previous verse to be En-rogel (the *Bîr Eyyub*). "The shoulder of the Jebusite" will be the spur of Zion, on which the "stronghold stood." Its proper name may have been Eleph; see Joshua xviii, 28—"Eleph and the Jebusite, which is Jerusalem," and Zechariah ix, 7, where Halévy proposes to read, "he shall be as Eleph in Judah, and Ekron as Jebusi." According to Joshua xv, 63, the Jews lived along with the Jebusites at Jerusalem; according to Judges i, 21, the Benjamites did so, but in Judges xix, 10-12, Jebus is "the city of a stranger." However, we find both Jews and Benjamites in Jerusalem in Nehemiah xi, 4, and 1 Chronicles ix, 3.

² We learn from Ezra viii, 20, that some of the Nethinim had been "given" by David to the service of the Levites before the temple had been begun; in Nehemiah vii, 46-60, these are carefully distinguished from "Solomon's servants." The first seem to have been the Jebusites who were taken by David with arms upon them; the second to have been those who, like Araunah, were allowed to live in their old quarters until after David's death. Besides the colony of the Nethinim on Ophel there were others who inhabited the portion of the Temple-hill north of the Temple.



Sketch-map of the well of Ophel from the angle at the turning of the corner:-



the difficulty occasioned by the loss of the *'ain* in the first element of which it is composed. I am however more inclined to see in this first element a play upon Yĕru, "a cairn," which we may gather from Genesis xxii ("in the mount of the Lord is יִרְאֵה") was the name of a locality on Moriah. Isaiah (xxix, 1, 2) similarly plays on the name by turning it into Ari-el. The title "city of peace" may well have been given to David's capital when his foreign wars had been ended, and the name of Solomon, "the peaceful," had been given to his son Jedidiah. The dual form Yĕrushalaim, which apparently goes back to the time of the Macchabees, probably refers to the old division of Jerusalem into the lower city and the Temple-hill.

A. H. SAYCE.

THE TOPOGRAPHY OF PRÆ-EXILIC JERUSALEM.

IN my paper on the Siloam Inscription, I have tried to show how closely the question of the date to which the inscription is to be assigned is connected with that of the topography of ancient Jerusalem. The key to the whole position is the fact that the south-eastern hill, the so-called Ophel, represents Zion, the City of David. This fact once granted—and it is now no longer possible to deny it—not only does the rest of the topography of præ-exilic Jerusalem become clear, but the Solomonic date of the Siloam Inscription, as it seems to me, follows unavoidably. It may assist the reader if I here summarise the arguments which I have urged in its behalf.

(1) Our knowledge of the water-supply of ancient Jerusalem is derived from three passages of Isaiah, a passage in the Books of Kings, and another in the Books of Chronicles. Only the first three passages are contemporaneous with the state of things to which they allude; their testimony is therefore superior to that of the other two passages, and should be considered first.

(2) According to Isaiah vii, 3, in the time of Ahaz, the prophet met the king "at the end of the conduit of the upper pool, in the highway of the fuller's field" (see also Isaiah xxxvi, 2). The fuller's field adjoined the Bîr Eyyûb; the upper pool, consequently, must be the Pool of Siloam, and the conduit the tunnel which conducts the water into it.

(3) In Isaiah viii, 6, also in the time of Ahaz, the prophet refers to "the waters of Shiloah that go softly," in contrast to the waters of the Tigris. The only softly-going waters at Jerusalem, conducted through the Shiloah, or "artificial aqueduct," were those of the Siloam Tunnel.

(4) In Isaiah xxii, 9, at the time of the invasion of Sargon (B.C. 711), and consequently in the reign of Hezekiah, the Jews are said to have "gathered together the waters of the lower pool." As "the lower pool" implies an "upper pool," the lower Pool of Siloam must be meant, and the

collecting of the waters in it must refer to some work by which it was supplied with water from the Virgin's Spring (the only spring in or near Jerusalem), instead of depending, as before, upon the rainfall alone. That is to say, the conduit which leads from the upper to the lower Pool of Siloam must have been cut through the rock at this time.

(5) This is expressly stated in 2 Chronicles xxxii, 30, unless this passage is to be interpreted in a sense contradictory to the evidence of Isaiah. The chronicler tells us that after sealing up "the exit of the waters of the Upper Gihon," which was outside the walls (see verse 3), Hezekiah directed them in a straight line, downwards, on the western side of the City of David. There is no other watercourse except the conduit leading from the upper to the lower Pool of Siloam which answers to this description.

(6) The passage in 2 Kings xx, 20—Hezekiah "brought water city-wards"—is too vague for any conclusions to be drawn from it, though it would most naturally refer to Warren's tunnel.

(7) The Siloam Tunnel must, therefore, have existed in the reign of Ahaz, and since we know of no Jewish king before Hezekiah who was a great builder, except Solomon, we are justified in ascribing its construction to him.

(8) This is confirmed by the Septuagint version of 1 Kings iii, which states that Solomon "cut through the City of David," an expression which can apply only to the Siloam Tunnel.

(9) It is, moreover, most improbable that Solomon, who constructed the fortifications of Jerusalem, should have allowed the only spring in the neighbourhood of his capital to remain outside the walls, without attempting to supply the city with something less precarious in time of siege than rain-water.

I have already remarked that, as Dr. Guthe and Mr. Birch have observed, the Upper Gihon of the chronicler, with its *motsâ*, or "exit," must be the Virgin's Spring, the *motsâ* of which is mentioned in the Siloam Inscription. Indeed, since Gihon means "a natural spring," it is hard to understand how any one with a knowledge of Hebrew could ever have supposed that it represented an artificial reservoir. Dr. Guthe has evidently hit upon the right explanation of the epithet "upper," which is applied to it. The compiler of the Books of Kings still knew only of one Gihon (1 Kings i, 33, 45; so also 2 Chron. xxxiii, 14); but after the exile what Isaiah called "the end of the conduit" came to be regarded as a second spring of water, in consequence of the aqueduct made by Hezekiah to the lower pool, so that the Virgin's Spring—that is to say, the original Gihon—was termed the Upper Gihon, and the lower outlet of the Siloam Tunnel the Lower Gihon, or perhaps Gihon simply.

Dr. Guthe's recent excavations and researches have brought to light two important facts. First of all, the Solomonic wall of Jerusalem enclosed both the upper and the lower Pools of Siloam; and secondly, a valley or depression formerly ran from the Tyropœon to the Kidron valley, entering the latter a little above the Virgin's Spring. With these

facts in our hands, we can, I believe, restore the topography of Jerusalem as it existed in the time of the Kings.

As I have already pointed out, and as Professor Robertson Smith has perceived, the determination of the City of David shows that the Tyropœon was the old valley of the son of Hinnom. Into this the western gates of the præ-exilic Jerusalem must have opened. What these gates were we learn from Nehemiah.

Nehemiah "went out by night by the gate of the valley, even before the dragon-well" (Neh. ii, 13). We gather from chapter iii that this gate was on the same side of the city as the Pool of Siloah, so that "the valley" must be the Tyropœon. It is called **הַגֵּי**, in contradistinction to "the brook-valley" (**הַנַּחַל**) of the Kidron. Jeremiah (xxxi, 40) terms it "the vale (*émek*) of the dead bodies and of the ashes," since it was to be choked with the ashes of Jerusalem, and the corpses of its defenders, by way of punishment for the human victims that had been burnt in it to Moloch (see Jer. xix, 6, 7, 11-13). The dragon-well must now be buried under the rubbish that fills the valley. Possibly it stood in connection with the old rock-cut drain or conduit discovered by Warren on the western side of the south-eastern hill.

As Nehemiah had to pass "the dung port" and "the gate of the fountain" before he reached the brook Kidron (ii, 13-15), it is plain that those two gates must also have opened into the Tyropœon. This gives us a clue to the position of the gates enumerated in chapter iii, which I shall now examine in detail.

Nehemiah here begins with the sheep-gate, and the towers of Meah and Hananeel, which defended it on the western side (Neh. xii, 39). As the sheep gate is mentioned in John v, 2, its position has long been recognised on the northern side of the Temple-hill (Moriah). This agrees with the fact that its restoration was undertaken by "Eliashib the high priest, with his brethren the priests," the natural guardians of the Temple-hill. Since Jeremiah (xxxi, 38) describes Jerusalem as extending from the tower of Hananeel to the gate of the corner in the extreme south-east, it must have been the most northern portion of the city, lying probably on the north-west, and thus occupying the site of the later tower of Antonia. See also Zechariah xiv, 10 (where "the king's winepresses" would naturally be in the king's garden, at the mouth of the Tyropœon).

The next gate mentioned by Nehemiah is the fish-gate (verse 3). This must have been on the west side of Moriah, and have opened into the Tyropœon, since the enumeration proceeds, after the notice of two or three more gates, to the mention of the valley-gate (verse 13), and the pool of Siloah by the king's garden (verse 15); we must therefore be moving from north to south on the western side of the city. According to 2 Chronicles xxxiii, 14, Manasseh built a wall all round the fortified part of the City of David, beginning with the sloping cliff west of the Virgin's Spring, which is described as "in the brook valley" of the Kidron, and ending with the fish-gate, from which it would appear that the fish-gate stood at the

western exit of the valley discovered by Dr. Guthe, which separated Zion from Moriah. Hence we can understand why Zephaniah (i, 10, 11) associates it with Maktesh, the merchant quarter of Jerusalem, and contrasts the "cry" heard from it with the "great crashing from the hills" on either side. Maktesh is further called the "second" city by Zephaniah, and it was here that Huldah lived, according to 2 Kings xxii, 14 (where the Authorised Version mistranslates "college"), the full expression appearing in Nehemiah xi, 9, where we read that "Judah, the son of Senuah, was over the second city."¹ The foreign merchants are termed by Zephaniah "the people of Canaan," or Phœnicia, and according to Nehemiah xiii, 16, "men of Tyre" dwelt in Jerusalem, "which brought fish." Hence, evidently, the name of the gate, which was the nearest and most accessible to travellers who approached the city from the sea-coast.

The "old gate" (verse 6) may have been the one by which the Jebusite town was entered. To the south of it came "the throne of the governor beyond the river"—which was possibly set up in the *bîrah* or "castle adjoining the temple" (Nch. ii, 8; vii, 2),—and "the broad wall." This protected the bazaars of the goldsmiths and perfumers (verse 8). Here "the half part of Jerusalem" seems to have ended, since the next piece of wall was built by "Rephaiah, the son of Hur, the ruler of the half part of Jerusalem;" while after a short interval, which was mainly filled with "the tower of the furnaces," the wall was continued by "Shallum, the son of Halobesh, the ruler of the half part of Jerusalem." At this point, we may assume, Zion, or the City of David, was supposed to begin.

The "tower of the furnaces," or rather "ovens," was probably near "the bakers' street" (Jer. xxxvii, 21). Here, at any rate, were the public ovens, built of the clay found in the valley below. It must have been in this part of the Tyropœon that the potteries were situated, which gave their name to "the gate of the potteries," mistranslated "east gate" in the A. V. (Jer. xix, 2). The gate of the potteries seems to be the valley-gate of Nehemiah, which, like the gate of the potteries, led immediately into the valley beneath. This valley-gate lay a thousand cubits to the north of the dung-gate (verse 13), so called, perhaps, from the dung which was here thrown over the cliff into the valley. South of it was "the gate of the fountain," and south of that the wall which enclosed "the pool of Siloah" (or, rather, "the aqueduct") "by the king's garden," and extended "as far as the stairs that go down from the City of David" (verse 15). Remains of these stairs have been discovered by Schick and Guthe a little to the east of the Pool of Siloam, and Dr. Guthe points out that they must have run as far as a point, inside the walls, a little to the south of the Virgin's Spring, since he has found traces of steps here. In the preceding chapter (ii, 14) Nehemiah has called "the pool of the aqueduct" (or "the Siloah") "the king's pool," from which we may infer that the king's pool was so named

¹ It would appear from this that Moriah was divided into two quarters, the first, on the south-eastern side, being known as the upper or "first city," while "the second city" lay below it on the west.

from its adjoining the king's garden. We learn from Nehemiah xii, 37, that the stairs led by "the house of David," which may be "the tower of David" mentioned in Cant. iv, 4, and used as an armoury, under which name it is alluded to in Nehemiah iii, 19. At all events the garden attached to David's palace must have lain on the slope or at the foot of the hill on which the palace stood, and was not likely to have been resigned by Solomon when he transferred his residence to the temple-hill. The king, therefore, after whom the garden and the reservoir were named, would have been either David or Solomon. I believe that the garden is the same, or partly the same, as that called "the garden of Uzza" in 2 Kings xxi, 18, 26, which could not have been far from the sepulchres of David, in which the successors of Hezekiah were not buried apparently because there was no longer sufficient room. We hear of an Uzza in 2 Samuel vi, and 1 Chronicles xiii, who died while touching the ark close to the threshing-floor of Nachon or Chidon, the spot being consequently called Perez-Uzzah. The threshing-floor must have been in a level but breezy spot, such as that at the entrance of the Tyropœon, and the context shows that it must have been close to the ascent to the City of David. I conclude, therefore, that when Manasseh built the outer wall round the City of David (2 Chron. xxxiii, 14), he built also a house for himself in the place known as the garden of Uzza, both garden and house being enclosed by the new wall.¹ It is, perhaps, a fragment of this wall that has been discovered by Colonel Warren south of the Birket el-hamra.

The fountain-gate may have derived its name from the Pool of Siloam, though I am more inclined to think that the fountain meant was that of En-rogel, the modern Bîr Eyyûb. It was the nearest gate to the latter, and probably opened upon "the highway of the fuller's field." It must have been just outside it that Isaiah met Ahaz (Isa. vii, 3), and that the Rab-shakeh delivered the message of Sennacherib to Eliakim, Shebna, and Joah, who had "gone forth to him" (Isa. xxxvi, 3).

The piece of wall following that which protected the Pool of Siloam extended "to the pool that was made and the house of the warriors," and was "in sight of the sepulchres of David." These were hewn in the cliffs above it, as we learn from 2 Chronicles xxxii, 33 ("the ascent of the sepulchres of the sons of David"), and Isaiah xxii, 16, and were accordingly enclosed by the wall. The position assigned to them by Nehemiah shows that Professor Robertson Smith is wrong in transferring the tombs to the neighbourhood of the temple-hill on the strength of Ezekiel xliii, 7, 9. Ezekiel merely declares here that the whole of the new Jerusalem, and not the temple-hill only, shall be dedicated to God, and, consequently, that no part of it shall be defiled henceforward by the corpses of its kings. There is nothing to indicate in what precise part of the city the tombs were.

The localisation of the royal sepulchres explains, as I have already

¹ Manasseh's building operations took place after his return from Babylon. Possibly he found the old palace on Moriah in a ruinous condition, and while restoring it occupied David's house in the lower city.

remarked, why they have never yet been found. Only excavation can bring them to light. It also explains why David originally fixed upon this particular site as the burying-place of himself and his family. It adjoined his palace, and doubtless formed part of the ground belonging to it. We learn from the cuneiform records that the Babylonian kings were buried within the precincts of their palaces, and that this was also the case at Jerusalem is shown by 2 Kings xxi, 18; 2 Chronicles xxxiii, 20. The "house of the warriors" must have been the barracks of David's body-guard, whose technical title was *Gibborim* (2 Sam. xxiii, 8; cf. xi, 9).

It follows from the description of Nehemiah that "the pool that was made" was the lower Pool of Siloam. Now it has long been recognised that this pool was the one enlarged by Hezekiah, and provided with fresh water by means of his conduit. Here, therefore, is another proof that the pool constructed by Hezekiah was the lower Pool of Siloam, and that his conduit is not the Siloam Tunnel, but the aqueduct which leads from it to the lower reservoir. The remains of the pool have been found by Dr. Guthe close to Isaiah's tree, and since the city wall forms one of the walls of the reservoir, the latter must have been constructed after the completion of the walls. Indeed, Dr. Guthe has discovered a subterranean channel running under the pool and walls and intended to convey the water of the Tyropœon valley into the valley of the Kidron, the natural course of the water having been destroyed by the fortification of the hill.

The next topographical indication given by Nehemiah is "the ascent to the armoury at the angle" or "turning of the wall" (verse 19). This brings us to the south-eastern extremity of præ-exilic Jerusalem, the corner, in fact, of Jeremiah xxxi, 38. The gate mentioned by Jeremiah as existing here is not noticed by Nehemiah, though possibly it may be the fountain-gate of Nehemiah. There were, however, two corner-gates, since the one referred to by Jeremiah occupies a different position from another mentioned in 2 Kings xiv, 13; 2 Chronicles xxvi, 9, and Zechariah xiv, 10. The latter was only 400 cubits south of the gate of Ephraim, which, as we shall see, was between the broad wall and the old gate, and stood to the north of the valley-gate. It was opposite the gate of Benjamin on the east side of Zion, and was also known as "the first gate." From this it is evident that it constituted the first entrance into the City of David on the north-west side, and must therefore have formed part of the fortifications entrusted to the care of Shallum, "the ruler of the half part of Jerusalem." Hence, further, it must have adjoined the tower of the furnaces, so that this must have been one of the three towers erected by Uzziah (2 Chron. xxvi, 9). The other two were at the valley-gate and the angle of the wall, where the foundations of a tower have been discovered.

We are now on the eastern side of the City of David, and Nehemiah's narrative, proceeding in a northward direction, takes us next to the private residence of Eliashib the high priest. Here there was a long stretch of wall, without a gate, the descent into the Kidron valley being too steep to allow of one, until we come to another "corner" or "turning of the wall"

(verse 24). This must be represented by the angle which turns sharply inwards to the west, uncovered by Dr. Guthe a little to the north of the Virgin's Spring. Unfortunately the text of Nehemiah that follows is imperfect, but it would seem from verse 25 that the northern side of the angle faced "the tower which lieth out from the king's high house that was by the court of the prison." We know from Jeremiah xxxii, 2 that the court of the prison was within the precincts of the royal palace. As the palace is stated to be "on high," the tower must have stood below it. Its position is further defined in verse 26, where it is stated that the Nethinim who lived on Ophel repaired the wall "as far as in sight of the water-gate eastward, and the tower which lieth out." The water-gate plainly derived its name from the Virgin's Spring, and a road must have led to the spring from it. From Nehemiah xii, 37 it appears that "the stairs" of the City of David terminated somewhere to the west of the water-gate, which would agree with the position of the steps discovered by Dr. Guthe westward of the Virgin's Spring. The stairs may have led into the broad sheet "before the water-gate" referred to in Nehemiah viii, 1.

"The great tower that lieth out" is again mentioned in verse 27. Here the Tekoites are stated to have "repaired a second portion, from in sight of the great tower that lieth out, and as far as the wall of Ophel." The nature of the ground explains these various statements. The water-gate would have stood on the northern side of the angle already described. Westward of it was another angle formed by the wall which turned off hence to the north-east, its eastern extremity, as has been shown by Warren's excavations, projecting very considerably beyond the first-named angle at "the turning of the wall." Consequently the tower which stood at this extremity would have been opposite the latter angle, though at a good distance from it, the intervening piece of wall forming the boundary of Ophel. Ophel, accordingly, was the rising ground which extended on the east side of Zion from a part of the wall running north of and opposite to the water-gate, as far as another part of the wall a little to the south of the great tower. From this latter spot, as far as the piece of wall which fronted the tower on the west, the fortification was restored by the Tekoites. But this work is described as having been carried on from north to south, instead of from south to north as in all other cases. The reason of this is to be found in the fact that the Tekoites had already repaired a piece of the wall on the western side of Jerusalem, and as this was north of the great tower on the eastern side, when they came to work on this side they began with the northern limit of the work assigned to them instead of the southern.

Ophel, accordingly, is not the whole of the south-eastern hill, which is really the old Zion, but only the rising ground at the north-east end of it. Consequently, the expression of the chronicler (2 Chron. xxxiii, 14) is somewhat loose, and the passage must really mean that Manasseh "built a wall outside the City of David," but westward of the Virgin's Spring, which was continued through the valley of the Kidron, and ran as far as the approach to the fish-gate, and that he also surrounded Ophel with a high wall.

The royal palace, as we know, was on the temple-hill, and adjoined the temple itself ; it would, therefore, have risen above the great tower, which was designed to defend the point where the temple-hill was separated from Ophel. The horse-gate, as we may gather from 2 Kings xi, 16 ; 2 Chronicles xxiii, 15 ; and Jeremiah xxxi, 40, was at the south-eastern extremity of the temple-hill. It was, in fact, the carriage-road into it, and Jeremiah implies that it was regarded as the northern boundary of the City of David, which, in future, the prophet declares, should become as holy as the temple-hill itself. It was to defend this gate that the great tower must have been built, the foundations of which seem to have been discovered by Colonel Warren.

As the horse-gate marked the southern commencement of the upper city, the wall to the north of it was naturally restored by the priests. The next gate was the east gate (verse 29), which is probably to be identified with the gate of Benjamin (Zech. xiv, 10), since the latter was opposite to the corner-gate on the western side, and was named from the fact that it opened into the territory of Benjamin. It no doubt lay below "the upper gate of Benjamin, which was by the house of the Lord" (Jer. xx, 2). At the extreme north-eastern corner of the temple-hill lived more Nethinim and merchants, who doubtless communicated by means of a street with those in the quarter called Maktesh. Here, apparently facing the north, was the gate of Miphkad, or "mustering."

The topography of the walls which I have thus endeavoured to extract from the account of their restoration given by Nehemiah, harmonises entirely with his description of the courses taken by the two choirs on the day when the walls were dedicated (Neh. xii). Here we are told that the first choir entered the city at the dung-gate, and then marching to the right made their way to the fountain-gate "which was over against them," and so "went up by the stairs of the City of David, at the going up of the wall, above the house of David, even unto the water-gate eastward." We may, perhaps, infer from this that the stairs began close to the fountain-gate. The other choir turned to the left, and accordingly passed "from beyond the tower of the furnaces even unto the broad wall : and from above the gate of Ephraim and above the old gate, and above the fish-gate and the tower of Hananeel and the tower of Meah, even unto the sheep-gate ; and they stood still in the prison-gate." The prison-gate is not mentioned elsewhere, and is either the gate of Miphkad, or an otherwise unnoticed gate between the latter and the sheep-gate. It must have stood near the common prison, which was, of course, different from the court of the prison in the palace, which was intended for high-born offenders.

My paper would not be complete without a word or two on the hills surrounding the ancient Jerusalem which are alluded to in the Old Testament. As I have shown, "the mountain that lieth before the valley of the son of Hinnom, and which is in the valley of the giants on the north," must be either Bezetha or Akra, the valley of the giants being the northern border of the ancient Jerusalem. The Mount of Corruption, on which Solomon raised high-places to the deities of the

surrounding nations (2 Kings xxiii, 13), *may* have been the Mount of Olives, since there was an old high-place on the top of it (2 Sam. xv, 32), but it may also have been on the western side of the city. Gareb (Jer. xxxi, 39), which was over against Jerusalem on the side of the Tyropœon, must be the hill on which the Church of the Holy Sepulchre now stands, and perhaps derived its name rather from Gareb the Ithrite, one of David's bodyguard, than from its "scabrous" appearance. Goah will be the district opposite to it on the eastern side of the city, and possibly denoted that part of the valley of the Kidron which lay to the north of the Virgin's Spring. The "king's dale" (2 Sam. xviii, 18; Gen. xiv, 17) ought to have been in the neighbourhood of the royal gardens.

A. H. SAYCE.

I append a rough sketch-map, in order to illustrate my restoration of the topography of præ-exilic Jerusalem.

THE ROUTE OF THE EXODUS.

1.

I SUPPOSE that the excavations which have been made within the last few weeks in Egypt will have turned the attention of many to a different point for the passage of the Israelites to that which has lately been advocated in the *Quarterly Statement* of the Palestine Exploration Society. I have felt for some time the difficulties connected with any route near to, or north of, Kantara; and I trust that very soon the matter will be much clearer to all who are interested in the truth of Biblical statements. When I went down the Suez Canal, and returned by it, some years ago, all I could say to myself was, that I *had* been over the spot where the Israelites crossed, but *where* that spot was I did not know. I hope that the discussion which has been proceeding will start from a new basis.

I start, therefore, by stating that I believe that the great debouching of the Israelites was not by way of Kantara, and the edge of the Mediterranean, but by way of Wâdy Tumilat, and the neighbourhood of Lake Timsah. The southern end of the land of Goshen ran up to the west of Wâdy Tumilat; the recent excavations at Tel-el-Maskhuta go to prove that Pithom and Raamses of Exodus i, 11, were at the eastern end of Wâdy Tumilat: the Wâdy Tumilat then must have been well known to the Israelites. I believe that when the command was given them to go forth out of Egypt they poured forth by Wâdy Tumilat. Thus doing they would be confronted by Lake Timsah. They would desire to turn northwards along its edge towards Kantara, the usual road to Syria, being also "the way of the land of the Philistines, which was near" (Exod. xiii, 17). But God did not desire that they should escape by that road; therefore, in Exodus xiv, 2, He bids them "turn." These two words, "near" and "turn," seem to give us two keynotes. Does not the first word, "near," point out that the escape was not from the northern end of Goshen by way of Kantara—for that would better be described as "direct," or as "directly

opposite"—but that rather it was by Wâdy Tumilat, which would rightly be called "near" to those who were at Lake Timsah? And does not the word "turn" just express the action of those who, being at Lake Timsah, were endeavouring to escape by its northern edge, but are now bidden to plunge into the difficulties that must meet them at the Red Sea?

In prehistoric times the river Nile must have poured the mud of Ethiopia into the Gulf of Suez by way of Wâdy Tumilat: this gulf would then be open, through the Bitter Lakes, up to Lake Timsah, if not further. In process of time the passage between the Bitter Lakes and Lake Timsah would be silted up; and as the channel of the Nile in Wâdy Tumilat was shallow, that would also be silted up, leaving Lake Timsah as a deep dépression of *fresh water*, and so still the "Lake of Crocodiles," as its name imports. From this mud of the Nile, in Wâdy Tumilat, the Israelites made their bricks for Pharaoh. The continuance of Lake Timsah would make the silting up between it and the Bitter Lakes to be but imperfect; hence *quicksands* would be naturally expected—indeed, when M. Lesseps was making his canal, "the Great Bitter Lake" was a morass full of reeds, and marsh plants, and the Arab name for it was "the Valley of Reeds." Thus we are led to expect the existence of a "Pi-hahiroth," i.e., "the place of quicksands."

This, then, is the position of the Israelites: they have "turned" from their most ready means of escape from Egypt—thus doing they come upon "the quicksands of Pi-hahiroth;" south of them appear the Bitter Lakes, then forming the upper end of the Red Sea. They are indeed "entangled."

Their last "encampment" before crossing is "by the sea;" further excavations may give us the true positions of Migdol, and Baal-zephon. Possibly this "encampment" was near the junction of the greater and the lesser Bitter Lakes, and there the crossing was effected. What we require is (1) sufficient water to become "unto them a wall on their right hand and on their left;" (2) not too deep a depression for the Israelites to pass over easily with wives and children: where this spot is likely to be the soundings of the lakes must suggest.

Let me recommend on this subject the most interesting articles by Miss Amelia B. Edwards, on "Is Ramases II the Oppressor of Exodus?" contributed to "Knowledge," in 1882-3; the "Cities of Egypt," by Reginald S. Poole; "La Bible et les Découvertes Modernes," 3rd edition, by the Abbé Vigoureux.

ADAM CLARKE SMITH.

II.

MAY I be allowed to make two remarks on the papers which have appeared on this subject?

If, after the passage of the Yam Suph, the Israelites found themselves on the shores of the Mediterranean, it is very strange that no indication of that fact is to be found in the narrative.

2. If, after passing the Yam Suph, they crossed the "way of the land of the Philistines" a second time, and were again forbidden to follow it, we should have expected to find some notice of this second prohibition in Exodus xv.

September 17th, 1883.

JOHN CYPRIAN RUST.

III.

WHENEVER the route of the Israelites after their encampment under Horeb is brought into notice, there spring up from many unexpected quarters questions which imperatively demand an answer. At such a time the loss occasioned by the premature deaths of men like Palmer, Holland, and Tyrwhitt Drake is sure to be felt. Just when criticism was beginning to demand greater accuracy and more methodical treatment in matters geographical and historical, their powers of observation were being trained into perfect efficiency. With them must have perished a mass of information of a special character, which had not been so thoroughly analysed and examined as to yield all the valuable metals it contained.

The journeyings of the Israelites from Egypt to Horeb have been well discussed by those who have personally examined the ground; and the survey by the English Ordnance Expedition in 1868-9 has done equally good work in settling many a disputed point, as in placing within easy reach of students a remarkably clear and accurate delineation of the country.

The superiority of the work done by travellers and inquirers of the Palmer school, in such a country as Arabia Petrea, is seen when one puts by its side the great achievements of even Burckhardt and Robinson, specially in the matter of correct nomenclature. To have secured the help of a linguist like Palmer, versed in all kinds of Arabic and Oriental literature, first in the survey of Sinai, and then in the exploration of the desert between Judæa and the Sinaitic Peninsula, was a piece of good fortune which will be appreciated more and more every day by those anxious to make more clear the Bible narrative.

In that book, what is the information given of the country and people through which the Israelites were to journey, and what is our present knowledge—or perhaps, rather, what is the value of the suggestions as yet made, as to the line which the Israelite march must have taken when they set forward to conquer the Promised Land? The land was surrounded by powerful nations, and these nations, in a state of development, were of necessity brought into contact with each other. Some day we may hope to discover Egyptian archives, which shall give a detailed account of the escape of the Israelite slaves in the time of Minepthah—just as we have now a contemporary illustrated history of the campaigns of the Egyptians, under the king who oppressed the Hebrews, against the Hittite Empire on the Orontes; or there may be a mine of Phœnician antiquities opened to us.

But what do we learn from the Hebrew book which has been so miraculously preserved to us—the Bible?

Abraham's history (Gen. xii-xxv, 10) is more full of geographical information than at first appears, while it introduces us to Hittites, Egyptians, Philistines, &c. Passing over the incidental description of Palestine contained in it, his journeyings take us to the Negeb, and so down to Egypt; to Bethel and Hebron; to Kadesh, the wilderness of Shur, Gera, and Beersheba; to Mesopotamia, Damascus, Syria, &c. The record of the raid of the combined kings from the Euphrates Valley, and the subsequent promise of the land from the river of Egypt (Wâdy el Arish) to the great river, the river Euphrates, makes us acquainted with the various peoples and tribes who then possessed the country which Ishmael's children and Esau's descendants subsequently received as an inheritance. Then, filling in many a little gap, we have the mission of Eliezer, his steward, to Mesopotamia, and also the incident of Hagar's wandering in the wilderness of Beersheba.

Of these records, the most important is that of the expedition of the combined kings. It was like a *Góm* of modern times, and followed possibly the very route up Wâdy Jerâfeh, which is known now-a-days by the name "Sikket el Gom." The allies seem to have crushed first the Rephaim at Ashteroth Karnain (possibly the "Beit el Kurin" not far from Rabbath Moab); the Zuzim, their neighbours in Ham, Ham-mat, or Ainmah; and the Emim, or Anakim, a kindred people, in the plain of Kureitun (Kiriathaim), to the south-east of Kerah. Next they attacked the Horites, the cave-dwellers of Mount Seir, pursuing them down to the edge of the wilderness, as far as a well-known spot, "the Terebinth tree of Paran." At this point the expedition turned, and, taking the line which the natural formation of the country suggests, swept along below the Negeb, in the direction of Jebel Araif, up to 'Ain Mishpat, which is Kadesh (the fountain of judgment near the "Holy City"). They smote all the country of the Amalekites, and they also smote the Amorites, who were then dwelling on the famous route of invasion which the Moabites and Ammonites used in Jehosaphat's time at Hazazon Tamar ("the Felling of the Palm trees"), "which is Engedi" (Gen. xiv, 1; 2 Chron. xx, 2).

Moses's mention in this place of the Amalekites shows that he is describing the country as it was inhabited in his time. For in the time of Chedorlaomer there could have been no Amalekites, as they were descended from *Esau's* grandson, "Amalek;" while the country (the word used is *Sâdeh* = "plateau") is clearly that tract of land known in Moses's time as "the country of the Amalekites," which was bounded on the one side by the Amorite possessions, and on the other by the Horites of Mount Seir.

The story of Hagar brings us into this same country. Abraham was sojourning at Gerar, between Kadesh and Shur (probably somewhere near Jebel and Wâdy Maghârah, where Professor Palmer stayed on the occasion of his "great ride," at the camp of the Teyahah Sheikh Suleiman) when the ridicule of the son of the Egyptian bondwoman Hagar roused the spite and fury of Sarah. Hagar had once before run away from Sarah

into the wilderness on the way going to Shur, and had taken refuge by the fountain on the caravan route, afterwards called by the Hebrews Becrlahai-roi, the locality being carefully given as between Kadesh and Bered, and which is supposed to be identified at the watering-place in Wády Muweileh. Her subsequent banishment with Ishmael took place in the wilderness of Beersheba. It is not likely that she went far from the encampment of Abraham, which had been moved further north than Gerar to Beersheba, seeing that the provisions supplied her by Abraham were only what she could carry. But we know that it was in the wilderness of Paran that she and Ishmael afterwards took up their abode, and that Egypt was so accessible that his mother took him a wife from among her own countrywomen. Abraham's Kadesh, and the wilderness of Kadesh, was certainly to the west of the Negeb, and was probably bounded by the rolling plain of Beersheba, and by the wilderness of Shur. I think Kadesh might be considered to be the southern boundary of the country through which Abraham pastured his flocks, as Beth-el might be placed for the northern limit. The city itself was possibly a Hittite shrine, for we know that there was a colony of Hittites settled at Hebron (Gen. xxiii), from whom Abraham bought Machpelah, and from whose daughters Esau, when he was forty years of age, took two wives, Judith and Bashemath. From a city so important the whole district round would take its name; while the boundary lines between the wastes of Paran and Kadesh would be very carelessly defined.

As to the progress of the nomad Amalekites, who seem to have been the most warlike and aggressive of the descendants of Esau: in Moses's time we find them in the great valleys surrounding Jebel Serbal, to one of which we suppose they gave the name Paran (transformed by the Arabs into Teirán), in remembrance of their former home in the hilly country beyond the Tih range; and we find them posted with the Canaanites in the mountains which bordered, on the south and south-west, the lower part of the Promised Land—the Negeb. In David's time they invaded the Negeb of Judah and took Ziklag; while in his concluding prophecy Balaam speaks of them as “the first of the nations” (Num. xxiv, 20).

It does not seem unreasonable to suppose that at the battle of Rephidim (which lasted a whole long day, and about which there was recorded on the commemorative altar, “Jehovah will have war with Amalek from generation to generation”) the Amalekites were so routed as to be forced to retire from all the valleys and pastures south of the Tih range. Westwards they could not go, because this was the celebrated mining district held by the Egyptians, while on the east were the Midianites. They would therefore be pushed into the northern desert of the Tih and the mountains of Magráh, Helal, &c. The *terminus ad quod* of the Israelites after Horeb was the Mount of the Amorites. Their way led through the terrible wilderness to Kadesh Barnea, while the wilderness of Paran is mentioned as the scene of their most important encampment, after the celebrated encampment in the plain Er Rahah.

Before I try to make clear a probable route for the Israelites, and

before I make any comparison between the suggestions of Professor Palmer and Mr. Holland, it may be well to take notice of any traces left in buildings or nomenclature by (1) Amorite or (2) Amalekite. The hills to the west of the plateau of Jebel Magráh are very rich in prehistoric remains of every description, as well as in those which belong to Christian and historical times. There are also strange memorials in the names of valleys, headlands, &c.

1. The vestiges of the Amorites may be noted in—

Dheigat el 'Amerín ("ravine of the Amorites"), a valley cutting through the range of hills to the north of Sebaita.

Rás 'Amir ("peak or brow of the Amorite"), a chain of low mountains fifteen miles south-west of El Meshrifeh, very conspicuous on the road from the watering-place in Wâdy el Muweileh, and about twelve miles north-west of the fountain in Wâdy Gadís.

Sheikh el 'Amirí, the name attached to the mound of stones on the slope of Wâdy Abyadh, between El Anjeh and Ruhaibeh.

The mountains and wâdies with which such names are connected exhibit terraces laid out for cultivation, carefully constructed banks, and walls to resist the Seils, &c. In the presence of such works of so great antiquity, it may be argued that the people who raised them were either the old possessors of the land, or fancied themselves to have such hold of the land as to justify them in such expenditure of labour.

2. As to the Amalekite vestiges, note the appearance of this powerful people in the Bible. Like the Amorites they were highlanders; indeed, the term Amorite is often merely a descriptive term like Canaanite, Perizzite, or Hivite. Such a country as the Sinaitic Peninsula, the Negeb, and the hills to the west of the Negeb (the country which as yet has been so little explored), seems a natural home for them. At the time of the Exodus they occupied the Teirán Oasis, all the plain which rises from 'Ain Akhdar to Jebel et Tih, and, as we may suppose, some part of the wild desert beyond, which was held in common possession with other tribes, termed 'descriptively Amorite, and must have been traversed by them when they left their home in the 'Arabah.

The prehistoric remains scattered over these districts are not all of the same character.

Professor Palmer notices a distinguishing difference between what he calls the Israelite remains at Erweis el Ebeirig, and remains in the same neighbourhood. One longs for some such clear evidence of their personality as was left by the Egyptians at Sarábít el Khádim, or Maghárah. All we have at present comes to this:—In the neighbourhood of Jebel Hadíd, a long day's journey south-east of the convent, Palmer and Holland examined the numerous remains which are seen there, and found them to be of two kinds. Suppose the beehive houses (which resemble the *bothan* of the Shetland Islands, and the *talayot* of the Balearic Islands) to have been an Amalekite village, we find others like them at the head of Wâdy el Biyár, where, scattered all over the rough open plain at the foot of

Jebel el Ejmeh, are also traces of dwellings in connection with the more primæval stone circles, or *dowdrs*. In Wâdy Hebrân, at Teirân, and on the expanse above Wâdy Hudherah are more remains, as well as at the mouth of Wâdy Nisrîn, where it joins Wâdy Teirân. Are these beehive houses Amalekite remains, or the remains of a previous people, or are we so to distinguish the one kind of village and cemetery from the other, as to say that the beehive houses belong to a people (perhaps Midianites) who occupied the land after the Israelite wave passed on northwards? Whichever way our conclusions incline, the land is found to have been capable of habitation, and to have presented some inducements to settlers.

I propose now to consider Mr. Holland's conclusions from his visit to the wilderness of Et Tîh in 1878. My own route in 1881-2 corresponded to some extent with his. At Erweis el Ebeirig, near the debouchure of Wâdy Sa'al, Mr. Holland turned north-east. Not satisfied with Palmer's identifications of Erweis el Ebeirig with Kibroth Hattaavah, and of 'Ain Hudherah with Hazeroth, he imagined for the Israelites a route which would have no inclination towards the sea, and proceeded to examine the pass Nagb Murrah, which leads over the lower range of Jebel et Tîh. He says that it is a difficult pass, and unsuitable for the passage of a large multitude. He also examined a pass leading up by Jebel Dhalâl, and the pass Nagb el Mûrâd ("the Pass of the Watering-place"), which was first brought to notice by Drake and Palmer. This pass is not arduous, though winding and impracticable for wagons. There are some much frequented wells at El Biyâr ("*the wells*"), about an hour from the base of Jebel Ejmeh, and there are wells in Wâdy Edeid, into which Wâdy el Biyâr runs. In fact, in all this district underneath the southern and south-eastern ranges of the Tîh there is plenty of pasture and a fair amount of water.

Mr. Holland seems by chance to have come upon the Derb es Soûrah while tracing down Wâdy el Atiyeh to its junction with Wâdy Sowâin. My Arabs brought me from Wâdy el 'Ain, after I had been down from Hudherah to the Gulf of Akabah, to Wâdy Soûrah. The cave with the pool of delicious water mentioned by Mr. Holland is exceedingly picturesque, and one almost expects to see at the bend of the valley a thriving Swiss village. The road which ascends from this point into the Tîh mountains is by no means steep, and might be adapted for heavy traffic. Looking back one has a splendid view over the peninsula, and realises better the incline of the whole district, which is so well described in the expression "going down to Egypt." The route from Derb es Soûrah leads north-east to Jebel el Herte, passing by a large Arab cemetery. Some four hours further on a road falls into it from Akabah, and my cameleer pointed out a stone with figures and signs cut on it which seemed like tribe marks, though they may have been ancient. One of the wâdies I traversed in this day's journey was called Wâdy el Butmeh ("the valley of the Terebinth"), and suggested to me the "Eil Paran" of Genesis xiv, 6 (translated in our version's margin "the plain of Paran," and written "Eil Paran.") From Jebel el Herte Mr. Holland journeyed some twenty-five miles north-eastward to Wâdy Meleg, which flows towards the 'Arabah. A raid of

the Haiwâtt Arabs into the Maâzi country, to the north-east of 'Akabah, deterred him from proceeding much further than the watering-place in this wâdy. My own route did not bend so much to the east, and brought me in about two days' journey to the wells of Themed, a little south of the Hajj route, and almost midway between Nakhl and 'Akabah.

A few weeks later on Mr. Holland made an expedition, under the escort of eight Haiwât Arabs, from Wâdy el'Ain, a wâdy coming down from the west side of the plateau of Jebel Magráh (the Negeb) to 'Ain Gadís. He tried unsuccessfully to explore the southern face of the plateau of Jebel Magráh towards Jebel 'Araif and Wâdy Garaiyeh, but he opened out an important country between Jebel Helál and Ismailia, which would be the line of traffic from the East to Egypt when Petra was a commercial centre, or when the Negeb was a thickly inhabited and well-cultivated country, as we feel sure, from the remains so visible now on the surface of the ground, it must once have been. His road brought him to the wells "Emshâsh," and near to others called El Jidy, and through the midst of the Jebel Maghârah range. Between Jebel Yeleg and Jebel Maghârah runs to the north-east Wâdy Dow, the two mountain ranges stretching away to the westward. Jebel Maghârah, on one of whose slopes are some old round tombs, probably takes its name "Cave" from an arch (the supporting masonry still stands) which covered over the water-hole. Here are many Nawamis, and the remains of a square building, 30 feet by 20 feet, of roughly-hewn stones without mortar, besides twelve large watering troughs of rude masonry.

The whole surrounding country must be full of ancient remains. Mr. Holland found a number of flint-flakes, and some beautifully made arrow-heads, and says that wherever there were no sand-drifts the ancient road could be traced by these flint-flakes.

Professor Palmer's conclusions are given in chapter xi, volume ii, of "The Desert of the Exodus." The points he makes are :—

1. On leaving Sinai the children of Israel were conducted to some place whence they might make an attack on the idolatrous nations who barred their way to the Promised Land. Numbers x, 12 gives the general destination, the chapters following the detailed account of the journey.

2. The first permanent halting-place was Kibroth Hattaavah ("the graves of lust"). At Erweis el Ebeirig are seen the traces of the actual encampment, and the traveller may hear from his Arabs the tradition which gives life and meaning to those strange remains.

Hazeroth ("Enclosures") and Hudherah correspond in Semitic orthography, and in geographical position.

3. After Hazeroth we are told in Numbers xii, 16 that the people "pitched in the wilderness of Paran." In chapter xxxiii the stages of the journey are given. One of these is Ezion Gaber, which was at the head of the Elanitic Gulf. . . . "It is therefore certain that they took the route by 'Akabah, and did not enter the Tíh by any of the passes in the southern edge of the plateau." (Here I cannot follow Palmer. I think it was as easy for the Israelites to get to Ezion Gaber by Derb es Sofrah and the

neighbouring passes, and then by Jebel el Hertz, and a wâdy like Wâdy Meleg, as to take the shore route, with its steep cliffs, promontories, &c. At page 514 Palmer tells us that Ezion = the Arabic "Ghadyán" = "Diana" in Latin, which is one of the stations in the Pentinger Tables on the route from 'Akabah to Jerusalem, and distant from 'Akabah fourteen and one-third English miles. But his measurement from Contellet Garaiyeh, which he proposed to identify with the Gypsaria of the Pentinger Tables, seems to be erroneous, since by the Tables the distance between Haila or 'Akabah and Gypsaria is forty-three miles, whereas on the map, in a straight line, it is about fifty-six miles. The only way to reconcile such a variation seems to be either to suppose the distances through the desert to be inaccurate on the Tables, or to put Elath or Haila some miles further north than the present fort of 'Akabah, and the Roman station Diana in Wâdy Ghadyán, instead of at the very spot where the port of Ezion may have stood; or, giving up the identification of Contellet Garaiyeh with Gypsaria, to place that station on the southern bank of Wâdy Garaiyeh.)

4. The wilderness of Zin must be the south-east corner of the desert of Et Tîh, between 'Akabah and the head of Wâdy Garaiyeh. The name "wilderness of Kadesh," though properly applicable to the plain in front of the cliff in which 'Ain Gadís rises, might have been extended in its application to the whole district. The wilderness of Paran comprised the whole Bádiet et Tîh, and Mount Paran is the lower portion of the mountain plateau in the north-east, known now as Jebel Magráh, below which, on the western side, is 'Ain Gadís, and Kadesh itself, situated on the plain by which most easily the Amorite mountains would be reached.

5. The Israelites, being encamped in the plain at the foot of the cliffs in which 'Ain Gadís takes its rise, were to march into Palestine by the easy route which skirts the western edge of the mountains. The spies were sent out from Kadesh, making a detour by way of the mountains of the Negeb, and striking into the heart of the plateau at Wâdy Ghamr; they were to search the land, and to return by the western route. They brought their grapes, pomegranates, and figs from some of the vineyards and gardens which one comes across in the country immediately above Wâdy Muweilih, and not from the valley of Hebron, some sixty miles distant.

6. In the mountain north-east of Wâdy Hanein, a locality where we find the Amorite name preserved in Dheigat el 'Amerín, Rás 'Amir, and Sheikh el 'Amirí, &c., the forces of the Amorites were doubtless concentrated, guarding the road to the Promised Land, *viâ* Rehoboth, as well as that which led through the centre of the mountains of the Negeb towards 'Ara'rah, the Aroer of Judah (a city to which David, after his victory over the Amalckites (1 Sam. xxx, 28), sent a share of the spoil, and towards the rich pasture country of the Canaanite, the King of Arád, marked now by Tell 'Arád.

7. In Deuteronomy i, 2, he finds a clear indication of the direction of the route of the Israelites. Moses is about to give the Israelites some account of the wanderings of "the forty years' punishment." He clears the ground at starting by saying, "There are eleven days' journey from

Horeb, *by way of Mount Seir*, to Kadesh Barnea." Though we have been so long on the way, keep before your mind that to the ordinary traveller the route was plain and direct. To reach Mount Seir *we* made twenty separate encampments before Ezion Gaber was reached. Water and pasturage and open camping-grounds had to be taken into consideration, as I foresaw when I pressed Hobab the Midianite, naturally well acquainted with valleys, &c., in the eastern portion of the peninsula, to act as our guide. But ours was an exceptional case.

8. The fertile portion of the Negeb is bounded by Wâdy Marreh, Wâdy Maderah, Wâdy el Abyadh, &c. The mountains to the south of these wâdies and the southern plateau of Jebel Magráh, through which the Israelites passed unopposed, was a sort of neutral ground between the Edomites on the east, and their kinsmen the Amalekites and other allied tribes on the west, who are spoken of in 1 Samuel xxvii, 8 as being "of old the inhabitants of the land as thou goest to Shur, even unto the land of Egypt." This land had previously been inhabited by the Avim (Deut. ii, 23), "which dwelt in Hazerim ('pastoral enclosures,' as at Hudherah, the *dowars* and stone circles so common in the district) even unto Azzah ('Gaza')." Edom proper, Mount Seir of Deuteronomy, is a narrow slip of country, for the most part mountainous, but very fertile, extending northward from the head of the Elanitic Gulf as far as Wâdy Kereh, the southern boundary of Moab. The eastern hills and terraces of the plateau of Et Tîh form its western boundary, and the Hajj route from Damascus to Mecca its eastern boundary.

9. There is no possibility of reconciling the passes in Deuteronomy and Numbers, either with each other or with the actual topography of the country, unless we place the wilderness of Kadesh Barnea in the desert south of the pass into the hill country round Meshrifeh and Sebaita—in the cliffs above which desert is 'Ain Gadís. Moses says (Deut. i, 7) that the mount of the Amorites is the goal of their journey from Horeb, and in verses 19 and 20 he says: "We came, having passed through the great and terrible wilderness" (words probably inapplicable to the lower Arabah when Ezion at the mouth of Wâdy Ghadyán was a port, and the terminus of a commercial road leading both to Egypt and to the Philistine country), "to Kadesh Barnea. And I said unto you, Ye are come unto the mountain of the Amorites, which the Lord our God doth give unto us." Kadesh, in Numbers xx, 1, is spoken of as being in the wilderness of Zin—just as Meribah Kadesh, in Deuteronomy xxxii, 51, the scene of the great transgression of Moses and Aaron, is also described as being in the wilderness of Zin. It is from that point—Kadesh of the wilderness of Paran, or of Zin (Num. xii, 16; xiii, 21, 26)—that the Israelites went up presumptuously to the hill-tops, and were smitten by the Amalekites and Canaanites.

10. Between the defeat at Hormah and the re-assembling of the people at Kadesh, the well-known sanctuary of another nation, is a gap of thirty-eight years, in which only a few incidents are recorded. They were the years of the penal wanderings of God's people, sunk now to the level of a

mere nomad tribe. But from Kadesh, in the fortieth year, they set out under God's direction, a new people, into the wilderness of the Red Sea (the route which led down to Ezion Gebir and Elath), in order to compass the territory of the Edomites, through which they had been refused passage, and to pass up by the eastern desert towards Moab and the Jordan fords. That the rallying point was Kadesh goes some way to prove that they could not have penetrated into the eastern desert before, for in that case the natural rendezvous for a nation wanting to reach the ford of Jordan would have been to the east of Edom, while had Kadesh been north of the watershed of the Arabah, there would have been a necessity for asking passage through a portion of the territory of Edom to reach it, both now and on their first visit.

11. The attack by the Canaanite, the King of Arád, is to be taken as an episode in the march of the Israelites, while they were encamped in the Arabah, near Mount Hor, and were waiting for the return of the messengers sent from Kadesh to the King of Edom,—just as the expedition against Midian (Num. xxxi, 1, 12) must have been an episode of their sojourn in the plains of Moab.

12. In Numbers xxi we have an account of the journey after the Edomite refusal was known. Its direction is first southwards to the head of the gulf, and then by Wâdy Ithm on to the road to Moab which runs between Edom and the limestone plateau of the Great Eastern desert.

The difficulty about the itinerary of Numbers xxxiii, if Palmer's view be adopted, that it gives the details of the various stages from Horeb to Kadesh, seems to me to consist in the minute account of the stations between Horeb and Ezion Gaber, and the omission of any between Ezion and Kadesh. The only explanations which in any way satisfy one are, that the Israelites took an unusual course to get to Ezion, or that they marched in several detachments by various routes, and so the several camping-grounds of the detachments are mentioned.

Ezion Gaber, at the head of the gulf, was geographically the most important point in their journey. Thence to Kadesh was a frequented road used by the merchant caravans. Palmer seems here to have got confused. He says that he has no doubt whatever as to the general direction of the Israelites' journey: he reminds us that the wind in Numbers xi, 31 brought the quails from the sea, as though the people were moving towards the sea rather than directly northwards to the rolling plain beyond 'Ain Akhdhar; and he believed that all, or at least a portion, of the unidentified names may be recovered in the district north-east of 'Ain Hudherah and south-west of the 'Azázimeh mountains. He then mentions Rissah as probably identical with the "Rasa" of the Pentinger Tables, sixteen Roman miles from "Diana" (Ezion); Haradah with Jebel 'Arádeh, at whose base runs the great Wâdy el 'Ain of the Hudherah district; Tahath with Wâdy Elthí, the connecting wâdy between Wâdies Hudherah and El 'Ain; Heshmonah with Heshmon, one of the frontier cities of Judah in the Negeb, towards the coast of Edom. These identifications *quite* throw out of gear the continuous itinerary of Numbers xxxiii, 16-36.

It is noticeable that many of these names of the stations are taken (as is the case with the Arabic names in use to-day) from features in the landscape, *e.g.*, from the strange formation of a cliff, from a conspicuous tree, from the presence of water, &c. And this would account, then as now, for the confusing recurrence of the same name in distinct, though not far off, districts. But such a record of certain journeyings as that given in Deuteronomy x, 6, 7, precludes this fact from being urged to support the theory that we are reading of two different periods of the great journey of the Israelites.

There is another view of the itinerary of Numbers xxxiii. It is set forth by Bishop Wordsworth in his Commentary. The itinerary, according to this view, is to be divided into four periods:—

First period (verses 5 to 15)—from Rameses to Horeb.

Second period (verses 16 and 17)—from Horeb to Hazaroth, and (supplying verse 16, Numbers xii) so to Kadesh Barnea.

Third period (verses 18 to 36)—from Kadesh Barnea the first time, to Kadesh Barnea the second time, a period described very briefly in Deuteronomy i, 46.

Fourth period (verses 37 to 49)—from Kadesh to the plains of Moab.

With this careful division, however, we get into confusion again with Deuteronomy x, 6, 7. *There* a journey is described with much precision. It starts from the watering-places of the great Beni-Jaakan tribe to Mosera (the well-known place—the historian says—where Aaron died and was mourned for thirty days), then to Gudgodah (Hor-hagidgad), and then to the district of Jotbath, which, after the wilderness, seemed a land of rivers of water.

In Numbers we have Mosera first, then Beni-Jaakan, then Gudgodah, then Jotbath. Of course there may be an easy way out of the difficulty, but it is hardly fair to say that in the one passage the first journey is described with its continuous and regularly appointed march, and in the other, with all the appearance (except in proper topographical sequence) of a regular succession of the proper stages of a journey, the capricious movements of a wandering people through a long stretch of years.

Such stations as Rithmah, Rimmon-Parez, Zibnah, Makheloth, Mithcah, Ebronah, might be anywhere in a district whose valleys are named merely from the existence of water, or of pasture, or of a single tree. Still, that four of the stations of this third period should be mentioned together in another record, which is describing the journeyings of another period, rather goes to negative the view that in this third period some of the stations of the penal wanderings are being given.

The prehistoric remains in the peninsula, in the Badiet et Tih, in the Negeb, and in Jebel Magráh, furnish a proof that the whole country must have presented a very different aspect to the Israelites from what it now presents. The discovery, too, of such roads from the district under the Et Tih range to the plateau and plains above, as Nagb el Mírád, Derb es Soúrah, and one still more to the north-east, shows that the access to the

Promised Land from the peninsula may have been easier than was supposed by Biblical students of a past generation.

Kadesh Barnea was the destination of the Israelites, and, as Palmer points out, drawing his inference from the strangely placed passage in Deuteronomy i, 2, "by the Mount Seir route." This probably meant by the 'Arabah. But if the Elanitic Gulf had its head at Ezion, near the mouth of Wâdy Ghadyán, it would be more natural for a large caravan bound for Ezion to make its journey inland than to take the seashore course, by striking it at the debouchure of Wâdy el 'Ain or Wâdy Wettîr. I am myself convinced that such a route from Hudherah (even if it were shown that Wâdy Elthî, between Wâdies Hudherah and El 'Ain, is not open enough for the passage of a large multitude) is quite practicable. It would make its first station at the lower water of Wâdy el 'Ain, and its next at the base of Jebel 'Aradeh, where is a fine open plain, rich in prehistoric remains. It would follow up the easy wâdies which pass the spring water at Soûrah, and lie near the upper waters of El 'Ain to the road—"Derb es Soûrah"—and so to the uplands of the eastern portion of the Tîh range. Though I was bound for the well Themed (my Arabs pronounced the word "Summed") on the Hajj route from Nakhl to Arabah, I could, from several points of view, survey the country stretching towards the 'Arabah. I imagine that no special difficulties would present themselves before reaching the western slopes of that great valley, and the point where I suppose Ezion to have been situated. A "terrible wilderness" is this portion of the country, but there are five known wells to the south of the Hajj route, and many watering-places, with much water after rain. From the numerous groups of Nawâmîs, and from the cairns or beacons one comes across, it is reasonable to suppose that this strange tract once possessed more life than now, and was more frequently traversed.

The route I followed from the well at Themed avoided Nakhl altogether; and I think it pursued the line which the Roman road, whose stations are given on the Pentinger Tables, took from Elusa to Diana. Except in the want of water between Themed and Muweileh (twenty-eight hours), the route involves no excessive fatigue or hardship. Jebel Muweileh and the 'Ain, which is supposed to be Hagar's well, "between Kadesh and Bered," lie more to the west than 'Ain Gadîs, but so near (about twelve miles) that the wâdy, which is wide and open, might be included in the wilderness of Kadesh.

In conclusion, I would observe that I don't see why Palmer lays such stress on "Hudherah" being "Hazeroth" of Numbers xi, 35. Hazeroth (Hazerim = "pastoral enclosures") was a very general term, and would apply to many of the prehistoric remains below the Tîh range. It may be a mere chance which has preserved the name in the word "Hudherah." On the other hand "Hudherah" is a beautiful oasis, and presents every attraction for the encampments of a multitude of people.

Palmer says, at the commencement of the story of his travels: "The scenes of the Exodus took place undoubtedly in that desert region—Arabia

Petræa. This includes, besides the Sinaitic Peninsula, the Bâdîet et Tîh (literally signifying 'the desert of the wanderings'), and some portion of Idumæa and Moab.

"The desert of Et Tîh is bounded on the north by the Mediterranean Sea and the mountains of Judah; on the west by the Isthmus of Suez; and on the east by the 'Arabah, that large valley or depression which runs between the Gulf of 'Akabah and the Dead Sea."

Of Jebel el Magráh he says: "The mountain plateau in the north-east of the Tîh is full of interest. . . . It is about seventy miles in length, and from forty to fifty miles broad, commencing at Jebel 'Araif, and extending northward by a series of steps or terraces to within a short distance of Beersheba. . . . It projects into the Tîh, much in the same way as the Tîh projects into Sinai, and, like it, also terminates in steep escarpments towards the south, falling away to a lower level on the south-eastern side. On the west it is chiefly drained by two main valleys, Wâdy Garaiyeh and Wâdy el Abyadh, which ultimately combine their streams, and, flowing into Wâdy el 'Arîsh, are carried on to the Mediterranean. On the east Wâdy Ghamr and Wâdy Marreh receive the greater part of the water-supply, and bear it down to the 'Arabah into the Dead Sea. This mountain plateau is the Negeb, or "south country," of the Bible. The watershed of the 'Arabah on its eastern limit is some twenty-five or thirty miles more to the south than the southern boundary of the Magráh plateau.

C. PICKERING CLARKE.

THORNHAM, EYE,
August 28th, 1883.

LARGE MILLSTONE ON THE SHITTIM PLAIN.

SPEAKING of certain peculiar stones in the part of Moab examined by Captain Conder he says: "The stone is yet more remarkable: it lies in the Ghor south of Kefrein, beside a thorn tree; it is $10\frac{1}{2}$ feet in diameter, and 3 feet 6 inches thick, being far too large and heavy ever to have been used as a millstone. It is pierced by a cylindrical hole in the middle, 2 feet in diameter. The Arabs call it *Mensef Abu Zeid* ("the dish of Abu Zeid"), and relate that this mythical hero here sacrificed a whole camel which he gave as a feast to the local Arabs when he was about to leave the Ghor" (*Quarterly Statement*, April 1882, p. 74).

This is the same stone which I examined early in 1876, and of which I gave an account in my report to the American Society, which was published in the winter of 1876-7. In my volume "East of the Jordan," p. 231, after having spoken of the dolmens in this vicinity, which Conder has since described, I say, "about half-way between these two places (*i.e.*, Tell Ektanu and Tell el Hammam) I found an immense circular stone lying

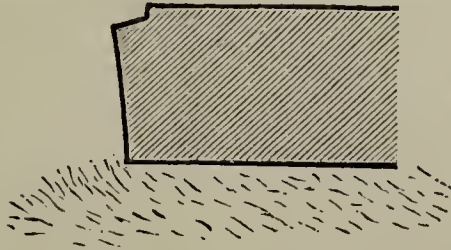
on the top of the ground ; it is 11 feet 4 inches in diameter and 44 inches thick."

Now a difference of 10 inches in the diameter of a stone of this size is considerable, and a similar remark may be made of the difference in our measurements of its thickness, although that is not so remarkable. Hence I ask myself "can I have been mistaken in my measurements?"

In April of the present year I spent nearly ten days east of the Jordan, and took occasion to revisit the stone in question, and to make accurate measurements of it. I found the diameter to be exactly as I had given it, 11 feet 4 inches. The thickness, however, cannot be so accurately determined, owing to the fact that the upper surface of the stone is uneven, and portions of the edge have been badly chipped ; besides, one side of the stone is a little thicker than the other, varying from 3 feet 4 inches plump to 3 feet 8 inches scant.

Two interesting facts connected with the stone remain to be mentioned. I noticed that it appeared to flare a little from the bottom towards the top, and upon measuring I found the circumference at the bottom to be 34 feet 7 inches, and at the top to be 35 feet 8 inches, making a difference of 13 inches.

The other fact is that around the outer edge of the upper surface there was a border about 5 inches in width, as seen in the accompanying cut.



Around this border a curb of wood was fastened tightly to the stone. This curb would be 1 or 2 feet high, according as necessity required, and thus the entire surface of the stone would be left free for the crushing of whatever the mill was designed for. Millstones arranged as now described with a border and a curb of wood are still in use in the country at the present day. All the indications seem to me to point to the inevitable conclusion that this particular stone was designed for a millstone and for nothing else.

On the same page (p. 74), Captain Conder describes certain "disk-stones," one of which is 6 feet in diameter and the other is 9 feet 6 inches in diameter, which "are much like millstones in appearance." "Their great size," he says, "and the absence of any remains of a foundation or other parts of a mill in their vicinity, is, however, a reason for regarding them as having some other purpose." These stones have "no hole in the centre."

Millstones that are brought to market at the present day are not always perforated by a hole in the centre, and as to the size of these stones

being an objection to their having been designed for millstones, it is sufficient to say that stones larger than the largest of these two are still in use in the country as millstones.

An American who visited this region some years since appears to have seen and described these identical stones. He asserts that on account of their size, and because they have no hole in the centre, they could never have been designed for millstones, and his antiquarian zeal leads him to see in them mysterious "solar disks," connected with the worship of Baal. But this same gentleman is famous in Palestine for having "discovered" a lot of "rude stone monuments of a high antiquity," "connected with early Phœnician worship." He even points out what part was "employed for the fire of wood or coals" and "where the victim was laid across." It turned out, however, that these were nothing but old oil presses, which even his elaborate description could not change into ancient altars.

SELAH MERRILL.

THE NEWLY-DISCOVERED CHURCH.

THE work of excavation at the newly-discovered church north of the Damascus-Gate, has been carried so far since Captain Conder and Lieutenant Mantell made their brief reports in the *Quarterly Statement* for April, 1882, pp. 116-120, that it needs to be described again. The ruin has proved to be one of great extent, and of special interest.

The way in which it was brought to light is worth recording. In an uneven field, which rose considerably above the land about it, parts of which appearing, indeed, like little hillocks, the owner of the soil tried to maintain a vegetable garden, but the ground was so dry that neither grain nor vegetables would flourish, and even irrigation did little or no good; besides, here and there large holes appeared in the ground which could not be accounted for. At last the owner determined to dig and see what there was below the surface of his field, and to his surprise he very soon came upon fine walls and a pavement. The excavations being followed up have laid bare a church with some of the surrounding buildings.

The amount of *débris* which had accumulated above the floor of these buildings was 10 to 20 feet in depth. To remove this mass of earth has required much time and labour, and the work is not yet completed.

The piece of ground in question has about 60 yards frontage on the main road (see the plan of this section in *Quarterly Statement*, April 1882, p. 119), and extends, so far as the excavations go, about the same distance back from the road, that is, to the east.

The church itself is situated on the south side of this plot, and is very near the street. The ground in front of the church is paved with fine slabs of stone, on one of which is the inscription given by Lieutenant Mantell on page 120. The steps by which the church was entered were 5 feet wide, but the doorway itself was somewhat wider. From the

entrance to the altar-step, or platform, the distance is 55 feet, and from that point to the back of the apse 15 feet 6 inches; the width of the apse is 16 feet 6 inches. The width of the church is 24 feet 6 inches. 9 feet in front of the altar-step a wall has been thrown across the church, in a manner similar to that in the Church of the Nativity at Bethlehem. This wall, also those of the church, of which several courses remain, and the interior of the apse, show that the building was originally painted, and some of the figures and designs can still be traced.

At the south-east corner of the church, leading from the apse, there is a narrow but well-built passage-way to the buildings in the rear. The character of these buildings is not very evident; certainly they did not stand on a line with the church, but at an angle of 25° with that line. Between the church and what appears now to have been the main building in the rear, there was a passage not over 3 feet wide; this passage and the one at the south end of the apse had been reached when Lieutenant Mantell made his report. The main building in the rear of the church is 47 feet 6 inches long, but to this must be added 20 feet more of a special room which seems to have belonged to it, and which had a beautiful mosaic pavement.

Thus the extreme length from the entrance of the church to the (present) east side of this mosaic floor is 140 feet.

On the west side of this mosaic floor, where it joins the wall of the main building, there is a threshold of a single stone 9 feet 6 inches long, with a step 6 feet 9 inches in the clear. This is considerably wider, it will be seen, than the steps, and even the entrance of the church. Several patches of mosaic pavement have been found, but in one place two or three square yards have been preserved, enough to show that the work was extremely beautiful. The coloured tracings resemble those in the church on the Mount of Olives, and on one side are the large Greek letters

ΩΕΟΥ.

North of this mosaic floor, and of the main building which joins it, and running alongside of both, there is a watercourse or channel cut in the solid rock, which has been levelled to accommodate the buildings above. This can be traced in an east and west line for a distance of 37 feet; it is 2 feet 3 inches deep, 20 inches wide at the top, and 12 at the bottom. From about the middle of the mosaic floor this channel turns a right angle and runs 20 feet or more (so far as I could trace it) to the north; it is possible that it led *from* the north, and at the point indicated turned a right angle and ran to the west. Piles of stones and *débris* prevent us at present from deciding as to the length of the channel or where it came from.

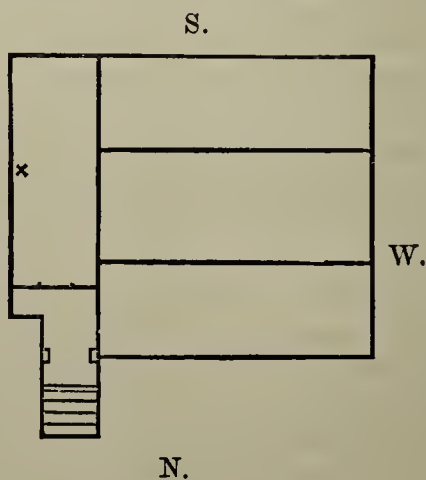
In the bank of *débris*, which rises on the east side of the mosaic floor to a height of 20 feet, there is, about 6 feet above the floor, a watercourse formed of cement, running north and south at right angles to the line of the church and the other buildings, which must have belonged to a much later period. In fact—and this is an interesting circumstance—the mosaic pavement appears to extend under and beyond this canal and the mass of *débris* which is yet to be removed.

In the north-west corner of the room where the mosaic floor is found, very near the angle (already mentioned) of the rock-cut channel, there is a tomb about 6 feet below the surface or level of the floor. The tomb is 10 feet long and 9 feet wide, and is entered by a doorway 26 inches wide, which is well built, and in the sides of which are grooves for a door to slide up and down. On the wall of the tomb at the east end there is a raised Greek cross, 22 inches long and 13 inches wide. At the left of the horizontal bar of the cross are the following letters or characters :—

= K X I D
y

Each letter is 5 inches in length. They are deeply cut, and the bar above them extends from the cross to the small character at the end. There appears to be something where I have made the dotted line, but it is not so deeply cut as the rest, and being very near the end of the cross-bar of the cross it may never have been designed as a part of a letter. The short verticle bar of the last character is cut as deep as the rest.

The following is the ground plan of the tomb :—



× Cross at this point.

One cannot stand erect in its highest part, but it is to be considered that the loculi are two-thirds full of *débris*, composed chiefly of decayed bones and bits of glass. Those in charge of the excavations have not, up to the present time, allowed the tombs to be cleared out. The loculi are 2 feet in depth.

What Captain Conder (p. 116) speaks of as “vaults north of the church,” turn out to be the tops of houses. They are four in number, each 75 feet long by 28 feet wide, and faced the street. They were divided (one or two of them at least) into apartments by means of arches. The

lower courses of the walls, to the height of several feet, are of squared stones, while the upper portions and the roofs are of rubble work, which was covered with a heavy coating of plaster. The threshold of one has been exposed, which is 6 feet in the clear, and the sides of the doorway show excellent work.

Among the ruins there are two sections of marble columns, each 33 inches in diameter ; but where they belonged in the original structure, or whether they belonged to it at all, I cannot say.

Three large cisterns have been found, two of which were nearly full of water ; the mouths of these, which were closed, were many feet below the surface of the ground before the excavations began, hence no one knows how old the water in them may be.

Some of the slabs with which the church was paved were 6 feet long by $2\frac{1}{2}$ wide.

In the church two pieces of cornice were found, each 8 feet in length. One is entire and quite plain, while the other is broken in the middle. It is upon this that the figures of Christ and His twelve Apostles were painted. They can still be traced, although exposure has nearly obliterated the colours.

Pottery and a considerable quantity of broken glass have been found, and some small articles in marble of no great value. The top of a certain block of marble has been formed into a basin, and a hole drilled the entire length of the block for the water to run off.

South of the mosaic floor and of the east end of the main building there is a large underground chamber with seven openings (each the size of a man's body) to the surface. The chamber is 12 feet wide and nearly 20 feet long, but the depth is not yet ascertained, owing to the accumulation of *débris* on the bottom. On the west and north sides a wall of solid rock appears to a depth of 6 feet, showing that the chamber was excavated in part at least in the solid rock. The use of this chamber does not appear evident, unless it may have been a store-room. The place within the city shown as "Peter's Prison" consists of a similar chamber (not dug in the solid rock however), with similar openings in the ceiling, or roof.

I have already hinted that the ruins extend under ground some distance to the east of the mosaic floor, and efforts are being made to purchase the land in that direction, in order to allow of the excavations being extended there. It is almost equally certain that the buildings extended to the south and south-east of the present plot of ground. But the owners of the land are jealous and everybody is superstitious ; consequently excavations must be abandoned, or move with aggravating slowness.

With regard to the inscription on the slab in the pavement in front of the church, given by Lieutenant Mantell, page 120, I have little new to add to what he has said. I have submitted copies to different scholars, but do not know that it has yet been satisfactorily read. In the copy given by Mantell, the first two letters in the fourth line need correction. Of the first, only about one-third of the upper right-hand portion of the letter is

perfect on the stone ; the second shows an **O** quite perfectly. As the left-hand edge of this stone is true, and perfect with the exception of some chippings at the lower corner, this slab can easily have joined another at the left, and thus have formed the right-hand end of a long inscription.

NOTE.

Since writing the above I have visited the church again, as I have done many times during the year past. The west wall of what I have called the "main building," towards the apse of the church, has been removed and the floor cleared, exposing a fine pavement. This pavement, the threshold before mentioned, and the mosaic floor all belong to one period, and to a structure very much older than the date of the "main building." It puzzled me because the threshold west of the mosaic floor was not square with the east wall of the "main buildings," but the reason is now clear. Captain Conder (p. 116) says of this church, with such of the ruins about it as were exposed when he was here, that "the whole is evidently of the Crusading period." As regards the church itself this to me is not so clear, and the mosaic floor especially I would carry back many centuries previous to that era.

At the south side of the floor of the "main building" a new mouth to the largest cistern has been discovered ; over the mouth there is a thick stone 5 feet in diameter. This was eight-sided, and was built against the wall, so that five sides are exposed. The stone was cut in such a way as leave on two of its sides small brackets shaped like the two halves of the utensil called a "tunnel."

It may be of interest to state that this piece of land was offered for sale a few years since, and for a long time went a-begging for a purchaser ; at last it was sold for 40 napoleons. During the present year it has passed into the hands of the French for 2,000 napoleons.

SELAH MERRILL.

THE BITUMEN OF JUDEA.

AN investigation of the nature of this natural product of Judea and the Dead Sea has been made by M. B. Delachanal, who has communicated his results to the French Academy of Sciences. It is employed in Palestine as an insecticide on the vines, and hence the recent attention it has attracted in France, where *savants* are still engrossed with the problem of fighting the phylloxera. Some kilogrammes of the bitumen were procured from the French Consul at Jerusalem by M. de Lesseps, and on this M. Delachanal has operated. He finds the presence of a considerable quantity of sulphur in its composition. It is a deep brown colour, nearly black, and of a friable nature. It contains 27 per cent. of oil, which is nearly colourless, and of the nature of petroleum. A solid paraffin can also be extracted from it. The rest of these experiments is that the bitumen of Judea, if it

prove efficacious as an insecticide, may also be turned to good account by the manufacturing chemist in the production of sulphur and illuminating oils. The presence of sulphur in its composition appears to assign to it a mineral, not organic origin.

THE HOLY ANOINTING OIL.

To the Editor of the Palestine Exploration Quarterly Statement.

SIR,—Captain Conder's note on this subject (1883, p. 102) emboldens me to conclude that my doubts were well founded ; otherwise he would certainly have pointed out some further proof of their authenticity.

I should like to say, however, that in my copy of the "Handbook to the Bible" (that of 1879), at page 105, there is really nothing to show that the statement I quoted was not that of the authors themselves, and even in the second paragraph, at the beginning of which the "Comment of Maimonides" is mentioned, it is the "mode of preparation" which he is said to "detail," and there is nothing to show precisely that Maimonides is responsible for the statement that "the Holy Oil failed in the reign of King Josiah."

Now that these assertions are attributed to that author, I think I may fairly expect Captain Conder to allow that, however "careful" an "authority" Maimondes may be, he should not be believed in opposition to the seemingly precise statement of the Hebrew Scriptures in the passages which I quoted (2 Kings xxiii, 30, and 1 Chronicles ix, 30).

Yours obediently,

June 25th, 1883.

H. B. S. W.

PILLAR, OR GARRISON ?

To the Editor of the Palestine Exploration Quarterly Statement.

SIR,—I think it will be as difficult for Rev. W. F. Birch to maintain that the "garrison" (A.V.) which 1 Samuel xiii, 3 and 4 tells us Jonathan smote, *could not* be a boundary stone or pillar, as for Captain Conder to show that it is at all *probable* that it was such a pillar that is spoken of throughout chapter xiv.

Three words are used, and though different, are so allied that two of them are in other cases rendered "garrison," "pillar," "image," &c.

May we not, however, succeed in reconciling both views ?

At any rate it seems clear that the actual signification must be sought in the context in each case, remembering that the root idea in all appears to be something "set up" or "placed" in a particular spot.

We use the word "post" as meaning not only a wooden or iron "post" or pillar, but also of a military "post"—outpost or garrison.

Evidently the common idea is that of something placed in a certain position, *there to remain*, whether by inertness of matter in the former case, or by faithful attention to duty of those engaged, in the latter.

Considering, then, that in Genesis xix, 26, Lot's wife is said to have been turned into "a **נֶצִיב**" (pillar) "of salt," it cannot be impossible that the same word in 1 Samuel x, 5 might signify a (boundary) *pillar*, of the same nature, and perhaps even actually the same as that which Lieutenant Conder supposed to have been the subject of the attack by Jonathan recorded in xiii, 3 and 4, where the word again occurs, and the "smiting" of which was the cause of the eruption of the Philistines recorded in the rest of the chapter.

But, on the other hand, in xiii, 23, where **מִצֵּב** is used, and the verse reads, "the garrison of the Philistines *went out* to the passage of Mich-mash," the expression can hardly be used of a boundary stone. In the next chapter (xiv), where this word is used throughout, except in verse 12, its meaning in verses 1 and 4 would be uncertain, but that they evidently refer to the same object of Jonathan's attention as is mentioned in verses 6, 11, and 12. In verse 12 **מִצֵּבָה** is used, and this in other places is translated *pillar* sixteen times and *image* nineteen.

If a stone were meant, the words of Jonathan in verse 6, "there is no restraint to the Lord to save by many or by few," would have no reference to their immediate object, though it might be supposed that he was thinking of the remoter consequences of his proposed act, but for verse 8 where he continues, "we will pass over unto these *men* and *discover* ourselves unto them," followed by verse 11, where we are told that "both of them *discovered* themselves unto the *garrison*," by the "*men*" of which (verse 12) they were "*answered*" in a way which showed that "the Lord hath *delivered them* into their hand" (verses 10 and 12). *Here* a Philistine outpost is evidently meant.

Yours obediently,

June 25th, 1883.

H. B. S. W.

PALESTINE EXPLORATION FUND.

Patron—THE QUEEN.

Quarterly Statement
FOR 1884.

LONDON:
SOCIETY'S OFFICE, 1, ADAM STREET, ADELPHI,
AND BY
RICHARD BENTLEY & SON, 8, NEW BURLINGTON STREET.

LONDON :
HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY,
ST. MARTIN'S LANE.

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ERRATA.

1883. Page 158, line 28. *For Sam. xx, read Sam. xix.*
1884. „ 156, „ 25. *For Leeds, read Leek.*
„ 159, „ 31. *Omit Mount.*
„ 198, „ 25. *For in, read of.*

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

The Geological Expedition which was announced in the October number of the *Quarterly Statement* has been successfully despatched. Professor Hull took leave of the Committee on the 18th October, and started on the 19th, accompanied by his son, Dr. Gordon Hull, and by two volunteers, Mr. Henry Hart and Mr. Reginald Lawrence. The services of Mr. George Armstrong, who has been employed in the Survey of both Eastern and Western Palestine, were secured, and he followed the party by way of Southampton and Gibraltar, Professor Hull going by way of Venice. At Cairo they were joined by Captain Kitchener, R.E. The arrangements for the expedition were entrusted to Messrs. Cook & Son. Everything was found ready on the arrival of the party: they left Suez on November 10th, and Ayun Musa on the 11th.

It was impossible to receive any intelligence from them for some weeks; that is to say, until they should be near enough to Jerusalem to send a message. The disastrous news from the Soudan, and Suakim, which would probably be learned by the Sinai tribes very quickly, caused some anxiety, lest there should be an outbreak of fanaticism. It was therefore with great satisfaction that a telegram was received on December 19th, to the effect that the party were quite safe within thirty miles of the Dead Sea, and that the expedition so far had been perfectly successful. This is, at present, all that is known.

It is, however, now clear that the estimate of the cost, to include the publication of results, set down in the October number of the *Quarterly Statement* at £2,000, was a good deal under the mark. As the whole of this amount will have to be met in the early part of the year, subscribers are entreated to forward their subscriptions as soon as possible. As in all previous expeditions, it is hoped to present a popular report of the whole in the *Quarterly Statement*, reserving the scientific part, which will probably prove voluminous, for separate publication.

At the last moment, this number of the *Quarterly Statement* has been delayed in order to allow the insertion of two papers by M. Clermont-Ganneau, which appeared in the *Times* of 26th and 27th December; one on two newly-found inscriptions of Nebuchadnezzar, and the second containing a full and instructive exposure of the forgeries systematically carried on in Jerusalem.

Captain Conder has completed his memoirs and drawings of the Survey of Eastern Palestine, and placed the whole in the hands of the Committee. The form of publication is not yet decided. The drawings include special plans of Amman and Arak-el-Emir, and, among other things, some hundreds of sketches of the remarkable rude stone monuments which he found in the country.

His book, "Heth and Moab," forming the popular account of the expedition, was issued in November, and has, so far, done very well. Extracts from the work will be found in the body of this number.

Canon Tristram's "Flora and Fauna" is completely printed, and the plates are being coloured. It will be issued early in March.

Sir Charles Warren's "Jerusalem" is also nearly ready. It contains, besides an account of his own excavations, a paper by Captain Conder on the history of the architectural monuments in the City; an account by the same officer of the excavation work in Jerusalem before and since Sir Charles Warren's work; and an account of M. Clermont-Ganneau's work in 1874-5. The plans and drawings to accompany it have been drawn on sixty large sheets in a portfolio.

These new volumes, with the portfolio, will complete this great and important work, which has been so long in hand. There are still some copies left, and the Committee beg to inform their friends that a circular can be had stating the contents of the work and the reduction on the published price of twenty guineas which they can offer to libraries and subscribers. It must be understood that this work will not be reprinted, and that it is by far the greatest and most important work ever done for Palestine. It is desired, above all, that the remaining copies should find their way into libraries where they will be accessible to all.

The only authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem.

(2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—

The Survey of Western Palestine.

Jerusalem..

The Hittites..

The Moabite Stone and other monuments..

The income of the Society, from September 19th to December 12th inclusive, amounted in all, including subscriptions, lectures, and payment for maps, memoirs, and publications, to £319 1s. 8d. Of this the sum of £36 7s. 0d. was specially appropriated to the Geological work.

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*; the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

NOTES TO ACCOMPANY A MAP OF THE LATE REV.
F. W. HOLLAND'S JOURNEY FROM NUKHL TO 'AIN
KADEIS, JEBEL MAGRAH, AND ISMAILIA.

THE following brief account of a portion of the Rev. F. W. Holland's last journey in the desert has been compiled from his field notes, which have been kindly placed at my disposal by Mrs. Holland. The journey was a remarkable one ; it was boldly conceived, and no less boldly carried to a successful issue. To those who did not know the man, his extraordinary powers of endurance, his firmness and earnestness of purpose, and his power of winning the confidence of the Bedawin, the feat which he performed must seem almost incredible. I have rarely met any one who possessed in so high a degree those sterling qualities which win not only the respect, but the esteem of savage races. Khawaja Hulhul, as he was familiarly called, was a welcome guest in every Arab tent, and it will be many years before he is forgotten by the wild children of the desert whose good qualities he had learned to appreciate during his solitary wanderings in the peninsula of Sinai.

Leaving Evesham on the 21st March, 1878, Mr. Holland reached Suez on the 29th. The 30th was occupied by an excursion to the Bitter Lakes, and on the 31st he started into the desert with only three Arabs and three camels. Mr. Holland dressed and travelled as a European ; there was no attempt at concealment ; he relied entirely on his knowledge of Bedawi life and character, and the trust which he reposed in his companions was fully justified by the result. How far he had succeeded in winning the love of his guides is shown by a little incident that occurred shortly before reaching Nukhl. The camels had been sent forward to get water from the fort, and Mr. Holland was alone with Sheikh Nassar in the desert ; the thermometer stood at 102 degrees in the shade, and the Sheikh's eyes were growing dim with the feverishness that comes of intense thirst, yet nothing could induce him to touch the scanty store of water which he was carrying for Mr. Holland ; nor was Sheikh Nassar alone in this respect, for whenever any difficulties arose about food or water, the three Bedawin always insisted on reserving what there was for their European companion.

Mr. Holland returned to Ismailia on the 23rd May, after an absence of fifty-three days, during which he travelled over 1,000 miles on foot—an average of twenty miles a day, excluding halts ; and visited a district which had never previously been explored, and which, from the character of its inhabitants, had been deemed almost inaccessible. The journey had been planned long beforehand. Mr. Holland, in conversation with myself, had often expressed his belief that the Israelites must have left Sinai by a route followed in 1840 by Baron Koller, of which there is a short notice in the "Journal of the Royal Geographical Society" for 1842 ; and that



Kadesh was probably near the south-east corner of Jebel Magrah, whence, he assumed, there would be a good road, "the way of the spies," northwards. It was not, however, until 1878 that he was able to carry out his plans. His journey has established, beyond a doubt, that Baron Koller's route offers an extremely easy road to the Tih plateau, such as might have been followed by the Israelites with their women and children, their flocks, and their waggons. Unfortunately, the presence of raiding parties of hostile Bedawin prevented a complete examination of the southern edge of J. Magrah, but Mr. Holland ascertained that that mountain did not extend as far eastward as was generally supposed; and that an easy road, such as he had expected to find, led northwards, between Jebels Magrah and Jerâfeh to the broad caravan road, followed from the north by Palmer and Drake. There are several indications in the Bible which would lead us to believe that Kadesh was at the south-east corner of J. Magrah, but, for the present, it will be safer to adopt Mr. Holland's opinion, that if Kadesh-Barnea be not at W. Kadeis, it may probably be placed near the south-east base of J. Magrah, in Râs W. Garaiyeh. Besides the two important points alluded to above, Mr. Holland determined the true course of W. el Arish, which passes through a remarkable gorge in J. Helal; and the drainage system of J. Magrah, which sends part of its waters northwards by W. Harâsheh to W. Hanein, and part westwards to W. Lussân. He also discovered the important alluvial plain east of J. Helal, and, on his return journey to Ismailia, followed an old road, previously unknown, which is, in all probability, the way of Shur, by which Abraham went down into Egypt.

The only account of Mr. Holland's journey is contained in a paper read before the Dublin meeting of the British Association in 1878, and printed in the *Quarterly Statement* for April, 1879. It was always his intention to prepare a fuller narrative, with a map, but, unfortunately, he was "called away" before the work was even commenced. The map which accompanies these notes has been prepared from the rough field books; and the valuable sketches of the great plain of W. Jaifeh, at the mouth of W. Kadeis, and of the pass between Jebels Magrah and Jerâfeh, have been faithfully reproduced from the original drawings by Mr. Johnson, of the Ordnance Survey. The first weeks of Mr. Holland's journey were devoted to explorations in the peninsula of Sinai and to an examination of the passes leading to the Tih plateau, including Baron Koller's route; but as this district is now being surveyed by Captain Kitchener, R.E., I have thought it better to confine the present extracts from the journal to the journey north of Nukhl.

EXTRACTS FROM FIELD BOOK.

May 6th, 1878.—Left camp in W. Tureifeh at 8.40 A.M., and at 9 A.M. crossed over some low chalky "jorfs,"¹ 100 yards wide, to W. el Arish; 9.30, course north-east, down W. el Arish; the actual bed of the wâdy is

¹ Jorfs are banks of alluvial deposit.

small, but it appears to spread its waters over at least half a mile ; passed some low chalk hills, weathered into peaks like tents. 10.20. Passed about half a mile west of the Castle of Nukhl ; W. el Arish is here a large, barren plain, with no trees. 12.15. Low hill to the west, Motalla el Nukhl ; alluvial plain. 1 P.M. Halt at junction of W. Rawâg with W. el Arish ; several "nawâmis."¹ 3.30 P.M. Started, and in ten minutes enter a tract of many acres, ploughed by the Arabs, to be sown with corn after rain ; the alluvial plain is now more than a mile across. 5.5 P.M. Camp for the night in the narrow bed of the wâdy, about 8 feet deep and rocky in places ; it is greener than the alluvial plain, which is so scored by watercourses as to be very bad ground for travelling.

May 7th.—Start at 6.10 A.M., and in twenty minutes reach a tract of 40 to 50 acres ploughed for sowing ; jorfs in W. el Arish 15 feet high. 8.30. Nuggah el Agâbah ; the alluvial plain is called Nuggah el Arish ; these two nuggahs are probably Palmer's Wâdies Abu Jize, a name which my Arabs do not know. 9.0. Wâdy Agâbah ; halt to visit "nawâmis" on a hill ; they are evidently old tombs, a circle of stones with a cairn in the centre ; I counted about thirty, scattered over a large area. On the hill-top were hundreds of snail shells and a quantity of lichen. A desert bird, "Mecky," seen here which, sitting on the top of a bush, begins a song like the low notes of a nightingale, and then suddenly springing up into the air, about 30 feet, and spreading out its wings, descends vertically with a succession of quick sharp notes. Wâdy el Arish runs north of J. Yeleg, not south as in Palmer's map. 12.30 p.m. Continued journey ; 1.40 reach north end of the alluvial plain we had entered after crossing W. Agâbah ; after ascending a flinty slope for about half a mile, we entered upon another plain, not alluvial, which seems to extend westward right up to J. Yeleg ; this mountain runs north-east, and has its highest peak in the centre ; it runs gradually out north-east and south-west, and must be quite twenty-five miles long. 2.30. Reach Nukb el Fahdi ; from this point there is a magnificent view of the country north-east, and at our feet was a large plain bounded on the north by J. Ikhrimm, which runs west and east, about three miles distant. 4.0. Crossed the bed of W. el Fahdi, in which there was much broom ; the road here has as many as twenty parallel tracks. 4.35. A large wâdy, "Emshâsh," runs in on the right from some white mountains to the south-south-east. 5.13. Camp in W. el Fahdi. J. Ikhrimm is composed of granite, sandstone, and limestone ; the upper bed with flint bands. There are two small "Sayal" trees in W. el Fahdi, below the mountain, and hence probably was derived the wood seen by Palmer in the buildings at Contellet Garaiyeh. The "Sayal" (acacia) appears to grow only in granite and sandstone districts, and it is curious to find them here in conjunction with an outbreak of these rocks. The strata at the north-east end of J. Ikhrimm have a dip of about 30 degrees to the east. The continuation of the El Fahdi cliffs, eastward to Palmer's cliffs

¹ The stone houses and circles so common in the Sinaitic peninsula, and the desert, are called nawâmis by the Bedawin.

400 feet high in W. Garaiyeh, could be clearly traced in the morning and evening lights.

May 8th.—Start at 6.15 A.M. ; and at 7.10 reach Palmer's "battlefield" ; W. Dométeh runs in from south-east, the wâdy north of J. Ikhrimm is called Hashan el Ikhrimm ; further north is a large rolling plain ; the Arabs say Jebels Helal and Yeleg are, like J. Ikhrimm, of granite ; their appearance confirms this. 7.45. Turned north-north-east across the plain ; W. el Fahdi runs off to the north. 9.0. Alluvial plain of W. Garaiyeh. 9.40. Reach the other side of the alluvial plain ; there is no regular watercourse ; W. el Hamr flows in higher up from the north-east ; the junction with W. el Fahdi is about a mile lower down. Palmer's J. Umm Hesairah is much exaggerated on his map ; it is a low hill. Passing through a line of very low hills, or rather mounds, which bound W. Garaiyeh on the north, we entered another large plain, El Kaa esh Sheraif. 12.25 P.M. Halt. 1.45. Continue journey over a gravelly plain ; my Arabs did not know the name W. Máyîn. 3.30. Head of pass over J. Sheraif, a long low range, which sweeps round in a semi-circle, the chord being north-north-west and east-south-east. It is formed by the sudden uptilting of the strata, and stretches eastward almost to J. Hamr. We lose from here the lines of the watercourses ; the eye is carried over them, and a vast plain appears to stretch southwards to Nukb el Fahdi, J. Ikhrimm, and J. Helal. The north side of J. Sheraif presents a line of more or less precipitous cliffs. The pass is narrow, up the bed of a small wâdy, and takes about half-an-hour to cross ; we turned down a small wâdy when half-way through, and came out on the plain nearer J. Helal, to which we turned. 4.50. Reach a large bed of alluvium. 5.30. Camped near some Arabs in the bed of W. Utvâdîf, in the middle of the plain.

May 9th.—Started at 6.15, across an alluvial plain, towards J. Helal for water ; on the plain were some fig-trees, young palms, and the "Hamârt," which has a leaf something like the tamarisk, and a fig-like fruit ; there were also Doura, and the stubble of old crops. 7.15. W. Hathîrah is the name given here to W. el Arish. 8.15. Halted while Zeid went for water to J. Helal ; he returned at 2.15 P.M. with excellent water. The watering-place is called "El Hathîrah" ; there are five bad wells and one good one, which is very deep. There were many Arabs and camels at the wells watering, and we had to pay for water¹ (comp. Numbers xx, 19). El Hathîrah appears as a recess or basin between J. Helal and a lower range in front of it. 2.45. Started again across the plain towards J. Meraîfig, and at 3.55 reach the edge of the alluvial plain, with its maze of ridges and furrows ; in wet weather it must be quite impassable. 4.40. Struck the "Siccet esh Sham" (road to Syria), and at 4.50 camped on the plain. A herd of gazelle and flock of sandgrouse, "Guttah," were seen during the day, and small whirlwinds were frequent.

May 10th.—At 6.15 A.M. started north-east across plain ; low flat-topped hills scattered here and there show a former higher level ; large

¹ Mr. Holland proposed to identify El Hathîrah with "Hezron which is Hazor" (Josh. xv, 25).

quantities of lichen on the small stones. 7.20. Sherâfeh, a pass over low hills ; there has been a gradual rise for the last half-hour ; we now descend to the plain of W. Jerûr. 7.50. W. Jerûr runs north-north-west ; the ground rises to the right of us and breaks into a low cliff on the east side, about a mile off. The name of the cleft through which W. el Arish runs is Er Râgah J. Helal. 9.15 halt in W. Saisab ; 12.55 start down W. Saisab. 1.30. W. Mimbutter, a broad shallow wâdy with alluvium ; cross some rising ground to a large plain, with much broom, extending apparently up to J. Magrah. 2.35. After crossing, for half-an-hour, a rolling plain, with several small wâdies running to W. Moweilah, we entered that wâdy near a small burial-ground ; here we met several Tiyâhah with fifty camels, which were feeding on the "Turfa," of which there is much in the wâdy. 4.0 P.M. Camp near a small cave, and close to a burial-ground with the tomb of a Sheikh, in whose honour we had sugar in our coffee, and repeated the first chapter of the Koran.

May 11th.—At 6 A.M., started east up W. Guseimeh. W. Moweilah turns east and forms an uneven basin about one mile in diameter ; the principal watering-place, in the centre, consists of a stream and three or four shallow wells with troughs. There is evidently much water here ; another large bed of rushes and damp sand marks the bed of a stream behind our tent. 7.30, unloaded camels in W. Guseimeh, and started up W. el 'Ain with Zeid. Great beds of rushes betoken the presence of water, and we had to pick our way through them on account of small streams. Above are numerous water-holes, and many camels were being watered. We stopped and had a talk with Tiyâhah Arabs, who said that J. Magrah was in the country of the Haiwât, of which tribe there was an encampment close at hand. We consequently returned to Nassar with two of the Arabs to talk over matters, and decided to load at once and go on to the Haiwât. There were great numbers of flint flakes all the way from W. Moweilah, and traces of old encampments. 9.15 started, and in thirty-five minutes reached the Haiwât tents in the middle of the plain at the head of W. Guseimeh ; I was most hospitably received by the Sheikh, and after dinner agreed with him for an escort to J. Magrah. On a hill between W. el 'Ain and W. Jaifeh, there are many round tombs and stone circles ; the wâdy is scattered with flint flakes and broken pottery. Below the mouth of W. el 'Ain there is a large level plain, forming the head of W. Guseimeh ; W. Sabh is a branch of W. Moweilah ; large numbers of sandgrouse seen.

May 12th.—Went with Selim up W. Guseimeh and W. el 'Ain ; the latter must overflow at times into the former, the head of which is a flat slope, used formerly for sowing corn, for which it is admirably suited, W. el 'Ain, after leaving the hills, sweeps round three groups of low hills in the plain of Guseimeh, and runs into W. Moweilah ; low mountains bound the plain on the north, running round in a semi-circle from J. Moweilah to J. Sabh ; there is a higher mountain behind the hills north of the Moweilah basin. The lower part of W. el 'Ain, before it enters the plain, is about a quarter of a mile wide ; the usual bed runs on the north side ; on the south is a thick bed of alluvial deposit, with many

W. Jaifeh.

J. Meraiig.

J. Aneigah.



WADY KADEIS AND WADY JAIFEH. (From a sketch by the late Rev. F. W. Holland, May 13th, 1878.)

A. Johnson, dell.

W. Kadeis.

rocks and boulders, which was in old days terraced for corn. In the centre, about half a mile up, is a rocky bit of ground covered with old tombs; Selim remarked that there must have been giants in those days, many of the stones used are so large. Higher up, W. el 'Ain branches, the main branch coming down from J Towâl el Fahm. The bed of W. el 'Ain rises rather rapidly as one ascends, but there is a good path up to the point where it branches: above this it narrows, but there is still alluvium on the south side. A mile higher up there are large beds of rushes, a pretty sure sign of water. The mountains seem everywhere to have stone ruins, usually, but not always, round, upon them; and flakes of flint are found near them. There is abundance of pasturage, both on the mountains, which abound with paths, and also in the plains. Between J. Magrah and J. Towâl el Fahm there is a large plateau on the same level as the hills north of W. el 'Ain, from six to ten miles across. A sandgrouse with nine young ones seen in W. el 'Ain; and nests found on the hills.

May 13th.—At 5.40 A.M. started south over a low pass.¹ 6.30. W. Jaifeh, several old tombs. 8.45. Stopped to kill a goat; a large "Gôm" (raiding party) of Maazi Badawin, two hundred camels strong, reported near J. Ikhrimm yesterday; the Arabs are afraid, and I cannot get them to go further to-day; they say the "Gôm" will go on during the night. The Haiwât Sheikh does not know the name of W. Gaiser (on Palmer's map); he calls the whole of this plain W. Jaifeh, though he gives the name of W. Dammath to the small wâdy we have followed. There is another W. Dammath, he says, near W. Sabh (this is given by Palmer). Walked to the mouth of W. Kadeis; the ground to the north-west of the mouth is broken by low hills; the wâdy is a good-sized one, and runs straight out into the plain; there are terraces for gardens and ruins near the mouth. There is a well in W. Jaifeh called Umm Sêigût.

May 14th.—Started at 5 A.M., and at 5.15 A.M. reached the mouth of W. Kadeis, quarter of a mile broad; course east up W. Kadeis. 5.50. 'Ain Kadeis just above a turn in the wâdy, where it becomes narrower. There are three springs, two on the hill-side, and one in the bed of the wâdy; from the lower spring on the hill-side a good stream of water flows for about 100 yards down the wâdy, forming pools at which the goats are watered; the camels go to the spring. The upper spring on the hill-side is a poor one now; it is built round with large rough stones to a depth of 5 feet, and there is a rude stone trough here and at the lowest spring. The three springs are not more than 40 yards apart. The wâdy, which is stony throughout, has a bed, below the springs, nearly 15 feet deep, between stony jorfs. As one ascends, the mountains become lower and less steep; there is much pasturage on them; the lower strata are chalk, with flints; the upper, hard limestone (nummulitic?); large masses have fallen down and lie in the valley. There are a few fig-trees and a bed of coarse grass. About 50 yards higher up the wâdy than 'Ain Kadeis there is a deeper well with four old watering-places; there are also traces of others near. 6.50. Start south-east up wâdy; terraces and ruins on hill-side. 7.0. The

¹ See sketch from this point.

main branch of wâdy turns north-east and winds round to east ; we keep south-east up a very narrow, steep, and rocky wâdy. 7.10. A Butmeh tree ; the wâdy forks ; we take left branch ; a rapid ascent by a fair mountain path ; meet goats and camels with women, all carrying spindles, and a girl with a nose ring. 7.30. Nummulites in crystalline limestone. 8.0. Four Arab tents ; the path on the mountain side above the wâdy ; steep sloping mountains, with flat rounded tops ; the strata horizontal. 8.40. A Butmeh tree ; the wâdy forks again ; we ascend the shoulder between the two, and a sharp walk brought us to the top of the pass. 9.0. Head of W. Haroof, which runs east-north-east to W. Harâsheh. 9.30. Start down W. Haroof, and at 10.0 reach Arab tents and halt. Some of the Arabs had been fighting the Maazi "Gôm" yesterday ; two Haiwât killed ; and seven wounded ; three Maazi killed. The Haiwât had gone down from W. Magrah to W. Garaiyeh, with twenty camels, to prepare ground for corn, when the "Gôm" came upon them and carried off their camels. There have been three Maazi "Gôms" lately ; the first took nothing ; the second was yesterday ; the third is still in the country below Nukhl. J. Magrah consists of rounded hills covered with herbage ; the rocks consist of very thin beds, less than 1 foot, of hard limestone, which, lying horizontally, give the mountain the appearance of having been built up in courses. 2.0. Start down W. Haroof. 2.12. Turn south-east up W. Harâsheh, which runs on eastwards ; Butmeh trees and corn ground. 2.44. The wâdy forks, and the country becomes rather more open ; the Arabs stopped here, as there were no tents further on. Ascended a mountain on the east with one of the Haiyât ; the mountains round appear flat-topped from a height. W. Harâsheh seems to drain the whole of J. Magrah, and runs into W. Hanein, round the east end of J. Towâl el Fahm.

May 15th.—At 4.20 A.M. started south-south-east up W. Harâsheh ; an open basin with Butmeh trees. 6.5. Halt at Arab tents ; many flint flakes about, and "nawâmis" on hills near. 6.20. Continue on, east, along mountain top ; patches of corn, and purple and yellow cistus. 6.55. J. Araif bears south-west six miles ; W. Lussân runs up into J. Magrah from J. Araif. 7.5. Cross the head of a wâdy running south to W. Lussân ; massive terraces and hundreds of flint flakes. 7.30. Another wâdy running south to W. Lussân. 7.40. Descend head of wâdy running south-east to W. Lussân. 8.40. Halt in W. Lussân. 10.45. Start, with two Arabs, south-east, up a branch of W. Lussân, and over the mountains. 11.30. Reach mountain over the head of W. Jerâfeh.¹ W. Jerâfeh runs between J. Araif el Retedj and J. Jerâfeh ; it rises between J. Araif and J. Magrah, and flows south through a narrow pass between low hills ; it then sweeps round to the east, draining a hilly basin under J. Jerâfeh, which appears from this point to be a triangular block. W. Garaiyeh rises between J. Jerâfeh and J. Magrah, and appears as a flat plain or basin half a mile broad. There is a good road this way across to the Arabah frequented by "Gôms." A long line of cliffs runs east-north-east, and west-south-west, and forms the boundary of J. Magrah at this

¹ See sketch of Pass between J. Jerâfeh and J. Magrah.

Jebel Magrah. W. Garaiyeh.

Jebel Jeráfch.



W. Jeráfch.

A. Johnson, del.
PASS BETWEEN JEBELS MAGRAH AND JERÁFCH. (From a sketch by the late Rev. F. W. Holland.)

point. W. es Sîk heads with a branch of W. Jerâfeh running east-north-east under J. Magrah. The mountains north-east of J. Magrah are called J. Ramân ; W. Ramân rises about half a mile north of this point and runs east. A very large wâdy, or plain, W. Jehâmi, runs into W. Garaiyeh ; it is bounded on the south-west by a line of white cliffs ; is this Palmer's W. Ghamr ? It took forty-eight minutes to rejoin the camels in the branch of W. Lussân. Hearing some Arabs were near we turned and went up the hill-side by a very steep path for camels ; on reaching the top we saw a good-sized valley running west with an Arab camp, at which we halted, about a mile and a half down. 'Cistus, hollyhock, and sandgrouse in the wâdy.

May 16th.—Started at 4.30 A.M. down W. Lussân, course west. 5.40. Left camels and walked south-west up a side wâdy ; five minutes lower down a large wâdy runs into W. Lussân from the north-east. 6.20. Reach mountain east of W. Lussân. There is no valley between W. Lussân and W. Garaiyeh ; there is a higher range to the south-east, beyond which lies W. Garaiyeh ; the lower mountains appear to run down from this to J. Araif. W. Garaiyeh is bounded on the south by a line of cliffs and groups of white hills. W. Lussân drains a large district of J. Magrah ; it is very broad below this, but narrows at the bend near J. Araif. The west was enveloped with mist, which gradually lifted. 8.0. Rejoined the camels, which had kept down W. Lussân, at an Arab camp near the mouth of W. Haroof (No. 2). 11.45. Started up W. Haroof (No. 2). 12.25. Reached the head of the pass. 1.5. Halt at a watering-place, "Umm Seiyer," a hole under a limestone cliff, with a slope of dung down to it. 1.30. Start and reach the bottom of the pass in about a quarter an hour ; then travel north-north-west across a plain with extensive alluvial deposits. 5.15. Halt in the bed of W. Dammath. There is no road except one pass between J. Magrah and J. Meraifig.

May 17th.—Started 4.10 A.M., and at 4.35 reached the end of the plain. 5.20. W. Guseimeh ; east of W. Moweilah, the ground slopes up from W. Guseimeh to the edge of the cliff on the W. Jaifeh side. 5.30. Halt at Guseimeh watering-place ; the water-holes were now full of good water. 6.5. Continued on through chalk hills in the centre of the wâdy. 6.35. End of central group of hills. 6.55. The bed of W. el 'Ain sweeps round to the left round a second and smaller group of hills. 7.20. Crossed W. Arêeshy, which has a large alluvial deposit. 7.30. Halt at an Arab camp. 2.10. Start for Ismailia. 3.15. 'Ain Moweilah. 3.55. Start down W. Moweilah. 4.35. A burial-place at the bottom of W. Moweilah ; met an Arab who inquired after Palmer and Drake. 5.15. Halt. We had a heavy shower and a grand rainbow at sunset ; heavy storms seemed going on northwards all the afternoon. Some Towârah Arabs camped with us.

May 18th.—4.30. A.M. Started west over alluvial deposits. 5.45. Turned south-west across W. Moweilah. 6.45. W. el Arish runs through the gap in J. Helal about three miles north-north-west of us ; we appear now half-way between the south points of Jebels Helal and Moweilah.

There is no wâdy north of W. el Arish, only a plain between J. Moweilah and W. el Arish. 7.10. W. Mimbutter (?), a bed of alluvium, which took twelve minutes to cross, runs down from W. Merafig. 7.27. W. el Arish; a large alluvial plain, ridge and furrow, covered with "Ajeram." 8.10. Reached west side of W. el Arish, and most glad to do so; the main body of the wâdy is on the west side, and is marked by a line of "turfa." 10.5. Started west up a hard gravel slope. J. Helal is of sandstone resting on granite, with long, low, outlying hills of chalk. 10.40. W. Hathîreh, full of broom "retem." 11.30. Reach other side of W. Hathîreh, and travel across a stony plain sloping to W. el Arish. 12.0. Rolling flinty chalk hills. 12.30. Descend to the head of a plain and wind round head of chalk hills. 12.40. Steep ascent for ten minutes to the top of a chalk hill. 12.50. Descend into plain. 1.25. A low pass. over chalk hills, covered with sand, into a large plain. To the south is J. Thurgah beta Garaiyeh, a continuation of J. Sheiger, sandstone, running east and west. 2.45. W. el Mitmûthang on left, runs south-south-east to W. el Arish; beyond it is a large plain covered with herbage. We ascend a bank from the sandy plain to a stony plateau. 3.30. Halt near an Arab camp under J. Helal.

May 19th.—Start at 3.20 A.M. up a gentle slope. 3.50. Water-parting. 4.35. West point of J. Helal, which gradually runs out north-north-west, distant four miles. We have kept parallel to J. Helal since leaving W. el Arish. There are no chalk hills at this end, or where there are wâdies, as at Hathîrah. 5.5. J. Mugrah Helbush, a low granite hill one mile north-west J. el Ubragin, a high granite range, distant about twelve or fifteen miles beyond the west point of J. Helal, chalk hill, parallel to the road, which runs over a level plain with occasional sand, and not much herbage, it drains north-west. 5.35. Cross a low water-parting. 6.0. Gentle descent to a large rolling chalky plain. 6.45. Large sand drifts. 7.0. Halt in W. Maghârah. 7.30. Continue journey, and at 8.15 cross a low water-parting; a line of chalk hills on the right, running north-north-west. 8.30. A low pass through a range of chalk hills running north and south. 8.45. Halted in W. el Hasanah (Azmon?) near a well. There are three wells sunk in the wâdy bed, but the water is bad, and only fit for camels; they are only built round at the top, and have curious round troughs as if made out of old columns; the water from a "seil" in the wâdy is good. W. el Hasanah is a large wâdy running east-north-east; it forks just above the wells. From this point, roads go to Nukhl, Suez, and Ismailia. 11.55. Start across chalk hills. 12.50. Cross a small wâdy running north-east from J. Yeleg, which is three miles distant. 1.5. Descend into fertile plain draining from J. Yeleg; the road to Sucz keeps on through J. Yeleg. 2.30. A large green wâdy running north across the plain; a break in the chalk hills under J. Yeleg. 3.25. Halt.

May 20th.—3.35 A.M. start; 3.50 sand drifts. 4.30. Cross the plain to the pass in J. Maghârah; there are many sand-drifts in the plain and ancient burial-grounds, tombs, and stone circles, two of which on a

low hill were 10 yards in diameter. Maghârah is approached by a long slope, and loses its height as it is neared. 7.10. "Emshash," a group of about seventeen wells; only one, which is built to the bottom with stone, has water now; the stones are cut with the draw-ropes; the water is not very good. Five minutes beyond the well is a group of seven old tombs on a ridge. Aid stopped behind to wash in the well; how many have done the same before! 8.15. Reach the foot of J. Maghârah, which lies nearly at right angles to our course; from Emshash there is an ascent up a stony slope; the road consists of ten or twelve very old camel tracks. J. Yeleg stretches west as far as I can see, though it is a remarkably clear morning. The plain and wâdy between J. Yeleg and J. Maghârah is called W. Dow; there is no water in it, but beyond is a watering-place, "El Jidy," a well like Emshash. 8.40. Halt. 9.50. Continue the ascent; and at 10.17 reach the head of the pass, which is called W. Abu Ragadât, and enter a gravelly basin, one and a half miles across. The basin is surrounded by sandstone mountains, capped with limestone, which form the head of W. Gûer, or Gwêr. 11.45. Extensive ruins of round houses and tombs; two Sayal trees; the wâdy runs north-east. We turn to the left up a branch called W. Maghârah. 12.40. Halt. 1.15. Continue up wâdy, and at 1.55 reach Maghârah, a dirty water-hole, with a slope of dung down to it; there are traces of old masonry. There is another water-hole, under a rock, about 100 yards below, with good water. There are twelve very large watering-troughs, built of rough stones, round the upper hole. On the hills near are ruins of rectangular buildings, 30 feet by 20 feet, built with roughly-hewn stones; there is no mortar, but wooden tie-beams are built in. The rock contained ammonites. 2.10. Left Maghârah. 2.50. Top of pass; shelving rock dipping to the north. Descend by a wild pass over polished rock; in many places the rock had fallen on the path, which was probably much better in former times. 3.30. W. Mutlakah running north. Fine Sayal trees; the rocky shelves oblige the road to turn north for the descent. 4.15. Many "nawamîs" and long lines of cairns, like those at Moweilah, along the mountain tops on the east; more than forty in one line. J. Sheikh Hamayd on the right. 4.45. Halt. Some Arabs of the Alaideh tribe coming up, and proving troublesome, we started on at 6.45, and at 8.40 stopped for the night.

May 21st.—At 2.45 A.M. continued our journey over a rolling plateau with drifting sand. 4.45. End of the sand, and commenced to descend. 5.15. Halt. An extensive view over a large plain covered with hills of drifted sand. 7.0. Start. El Mahâddab, a watering-place, on the right. 8.30. J. Ras el Ellôo, a low mountain three miles to south-west. 9.0. Halt half-an-hour for camels to feed. 11.45. "El Motalla," a prominent point with "nawamîs"; found an arrow-head in a flint factory. Commence descent; a long low range, in the distance, on the south. 12.35. Halt. 2.30. Continue journey, and at 4.45 halt for the night.

May 22nd.—Start at 3.20 A.M. At 3.55 the head of a depression which runs south-west, and after two miles sweeps round to the west. 5.0. A long higher range of sandhills north of us at about two miles

distance ; the sand is blown up from the north. A number of snakes' egg-shells seen yesterday and to-day. 6.15. Halt. 7.45. Continue journey. 10.55. Reach a high ridge after a long ascent. J. Hathâyib and Ras el Elôo in sight. J. Umm Ukshayb, a long low range, running north-east by south-west, about twenty-five miles distant on the right. 2.30. Sighted Ismailia and a large vessel going up the canal. Endless ridges and sand-drifts, walking not so good as yesterday. 2.45. Halt for the night.

May 23rd.—Start at 3.20 A.M., and reach canal at 7.15.

The above is an almost verbal transcript from Mr. Holland's field book, omitting the bearings, &c., which have been utilised in the construction of the map. It will be more useful to students in this form and will enable the general reader to follow Mr. Holland's route on the map, and realise the extent and value of his work, as well as the difficulties which he had to encounter.

C. W. W.

METEOROLOGICAL OBSERVATIONS.

Date and Place.	Minimum Thermometer.	Barometer.	Altitude.	Remarks.
	Degrees.	Degrees.	Feet.	
May 6, W. Tureifeh	47	28·52	1560	N.W. Breeze, . cloudy.
Junction of Wâdies Rowâg and el Arish	....	28·70	1390	
„ 7, Camp W. el Arish	40	28·90	1200	Dew, light breeze from N.W.
Nukb el Fahdi ....	....	28·70	1390	
„ 8, Camp W. el Fahdi	49	29·10	1015	No wind, eloud- less.
Pass J. Sheraif ....	....	28·90	1200	
„ 9, Camp W. Utvâdîf	53	29·33	800	
„ 10, Camp on plain	46	29·40	735	
Sherafâh Pass ....	....	29·30	825	
„ 11, Camp W. Moweilah	42	29·35	780	
„ 12, Camp W. Guseimeh	42	29·03	1080	
Hill N. of W. el 'Ain....	....	28·50	1580	
„ 13, Camp W. Guseimeh....	49	29·10	1015	
„ 14, Camp W. Jaifeh ....	....	28·60	1485	
Mouth of W. Kadeis ....	....	28·55	1530	
Ain Kadeis ....	....	28·36	1715	
Head of W. Haroof ....	....	27·12	2935	
„ 15, Camp W. Harâfeh ....	....	27·40	2655	
Arab tents on hill ....	....	27·00	3055	
Hill above W. Jerâfeh ....	....	26·60	3460	
„ 16, Camp W. Lussan ....	....	27·35	2705	
„ 17, Camp W. Dammath....	....	....	....
„ 18, Camp W. Moweilah....	....	29·45	685	
W. el Arish ....	....	29·50	640	
Level of chalk hills ....	....	29·20	920	
„ 19, Water-parting ....	....	29·40	735	
W. el Hasanah ....	....	29·30	825	

Date and Place.	Minimum Thermometer.	Barometer.	Altitude.	Remarks.
	Degrees.	Degrees.	Feet.	
May 20, Camp in plain	29·32	810	
Foot of J. Maghârah	29·17	890	
Top of pass	28·98	1125	
Do.	28·60	1485	
W. Mutlakah	29·10	1015	
„ 21, Plateau	29·10	1015	
El Motalla	29·36	770	
„ 22, Head of depression	29·72	440	
Top of ridge	29·68	475	

"HETH AND MOAB."

THIS book, by Captain Claude R. Conder, R.E., is a popular account of the recent expedition to survey Eastern Palestine, interrupted and stopped by peremptory orders from Constantinople, as the readers of the *Quarterly Statement* already know. The work has now been out for two months, having been published in October, and the first edition is already nearly exhausted. It treats, in twelve chapters, of Kadesh on Orontes, the Land of the Hittites, the Phœnicians, the Land of Sihon, the Land of Ammon, Mount Gilead, Rude Stone Monuments, Syrian Dolmens, Syrian Superstitions, the Belka Arabs, Arab Folk-Lore, and the Future of Syria. There are also appendices. The following extracts are offered as some kind of guide to the contents of the volume.

The Cemetery of Tyre.

"But if the Tyrians were not here buried, where (it may be asked) was their cemetery? This question we may, I think, now answer. They were buried on the island, where the modern cemetery now exists, south of the town. Tyrian tombs consist of a chamber with *kokim*, or tunnels for single bodies, running in from the walls—three or four on each side of the chamber, as in Jewish tombs of the earliest period; but there is an essential difference between the two, for the Jewish chamber was reached by a little door from one side, the entrance being cut in the face of a cliff or steep slope. The Phœnician, on the other hand, like the Egyptian, sunk a shaft down from the flat top of the rock, and placed his chamber at the bottom, filling the shaft no doubt with stones, or covering it with a slab. Thus, while the Jewish tomb remains still recoverable, though rifled, the Phœnician is hidden as soon as a little rubbish has gathered over the rock. Curiously enough, we were able to prove this, and to show where one Tyrian, at least, was buried on the island, for in the cliff of the little bay

in the south-west angle of the double island is a hole, and through this it is just possible to squeeze into a small cavern called 'the Champion's Cave,' about ten feet by eight, and eleven high. Looking up, we could see the shaft which was the original entrance, covered with flat slabs, which are hid beneath the soil in which the modern graves are dug. The champion's grave had been plundered by some former visitor, and only the place where his sarcophagus lay could be seen ; but on the top of the cliffs, which are about thirty or forty feet high, a large sarcophagus is still lying. To prove our contention more completely, excavations in the cemetery would be necessary ; but as single tombs are rare, and the site of any necropolis generally immutable in the East, we may fairly consider that this discovery indicates the site of the old Tyrian cemetery."

The Fertility of Mount Gilead.

"Sycamore, beech, ilex, wild fig, are said to be among the species of its forest trees, and the carpet of wild flowers in spring is more luxuriant than elsewhere. Clover and ragged-robin, the red and white cistus, clematis, crow's foot, purple lupins, squills, the pink phlox (commonly called Rose of Sharon), the anemone, cyclamen, corn-flower, salvia, asphodel (both yellow and white), with vetches and wild mustard, marigolds, borage, moon-daisies, pheasant's-eye and cytizus, also orchids and broom, star of Bethlehem and poppies, tulips, and buttercups, are among the familiar plants on these hills. The mock-orange (styrax), the may, honey-suckle, and antirrhinum are found in the woods ; and the oleaster, or wild olive, is not unfrequent. The lentisk, which is so common a shrub (with arbutus and laurestinus), is akin (at least according to some) to the balm of Gilead ; but whatever be the real plant or shrub of the balsam, the traveller who has wandered over the Moabite deserts, or the scorching plains of Bashan, will not fail to find that there is 'balm in Gilead.' In its glades he may hear the blackbird's note, the nightingale, and the twitter of many familiar song-birds. Here the tomtit, the hoopoe, the beautiful jay, the roller, and the bee-eater, rejoice in the shade of the woods by the clear streams ; here the roe and the fallow-deer still find a covert. The visitor cannot wonder that Gilead should be indicated to the persecuted Jews as a refuge and home, and, perhaps, had Israel known what lay before them in the dark mountains of the west, it would not have been only Reuben, Gad, and Manasseh who chose for their lot the eastern hills."

Rude Stone Monuments.

"The religion of the ancient races is intimately connected with all rude stone monuments, and temple and tomb are as closely united as they still are in a cathedral, with its famous dead, in our own land. Famous stones have names which seem to give them a human individuality. Such are the King-stone, Long Meg, or the stones of King Orris, Woden, St. Patrick, St. Declare, or St. Fillan in the British Isles. In France we have Pierre Martine and others, and the names given to stones by the Khassia tribes,

such as ‘stone of the oath,’ ‘of grass,’ ‘of salt,’ are equally instructive. The student who neglects the indications afforded by tradition, and endeavours to make the monuments tell a new tale without crediting that related by the descendants of those who erected the menhir or dolmen: who leaves out of account the beliefs and hopes and sorrows of those childlike ages, and thinks that man in savage times was but the utilitarian which civilisation has made him, is not likely really to penetrate into the mystery of these earliest of human monumental structures, and fails to sympathise with the ideas of builders whose conceptions of rugged grandeur, and of the moral effect of huge masses and of number, still excite the admiration of men in times when art and skill have so far surpassed the first efforts of the illiterate and prehistoric period.”

The Meaning of the Syrian Monuments.

“The menhir is the emblem of an ancient deity, the circle is a sacred enclosure, without which the Arab still stands with his face to the rising sun. The dolmen, whether modern or prehistoric, is (when free-standing) an altar rather than a tomb. The cairn is not always sepulchral, being sometimes a memorial heap; the disc-stone is a distinct production, perhaps of a later age. Such evidence as we possess shows that the rude tribes beyond Jordan buried their dead in small chambers cut in the rock, or in tombs similar to those of the Phœnician and the Jew, and not beneath the table-stone of a free-standing trilithon; while the mounds of the Jordan valley and of the Hittite plains, whether citadels or sacred hills, have as yet never yielded sepulchral deposits.”

To say that we still find the altars of Balak standing on Nebo may be premature. To point out the great dolmen at 'Amman as the throne of Og may be considered fanciful by some; but we may at least claim that we find structures which seem to resemble the early altars and pillars mentioned in Scripture still existing at places which, on entirely independent grounds, may be identified as representing the Mizpeh of Jacob, and the holy mountains of Nebo, Baal and Peor. While in Judea not a single dolmen now remains standing, because in their zeal for the faith of Jehovah, the good kings Hezekiah and Josiah swept away for ever the ‘tables of Gad.’”

Fish Superstition.

“The mosque of el Bedawi, at Tripoli, contains in its courtyard a cistern, or pond, of sacred fish. These are believed to have disappeared during the Russo-Turkish War, and to have been transformed into Moslem warriors, who fought for the Sultan. After the war they resumed their fish-form, and returned to Tripoli, re-appearing in the tank. According to M. Blanche, the Beidawiyeh, as the mosque is called, takes its name from St. Antony of Padua, whose church once stood here. St. Antony, be it remembered, was the saint who preached to the fishes, and it is probable that the sacred fish-pond was found already existing by the Crusaders, and was then consecrated to the saint. Tripoli was once a sacred city of

Venus, and stands on the stream of Kadesha, or Kadesh. To Venus the sacred fish were no doubt once holy, and at Ascalon and Accho, down even to the fifth century, the Syrian Venus had still her sacred ponds. It is interesting, therefore, to note that there yet remains at Accho (St. Jean D'Acre) another pond of sacred fish, and that a riot was caused in this town not many years ago by the imprudence of a monk who fished up and broiled for his own eating one of the supernatural fish of Accho."

The Character of Muhammad.

"Muhammad was a poet who had gathered a scanty crop of materials from sources almost inexhaustible: these ideas he clothed in language which cannot compare for force and beauty with that of the originals, and he repeated them with wearisome iteration. His ideas were essentially narrow, and without originality, as compared even with the teaching of Zoroaster and Buddha; and, however great his triumph among Arabs, who were mere savages in a boundless wilderness, the power of Islam has been consolidated by men not of Arab race, and it is impossible for the civilised European, unless led astray by enthusiasm or by interest, seriously to maintain that the barbarous fatalism of Islam is the religion of the future."

HAMATHITE AND EGYPTIAN.

It may be of interest to give the values of some of the Hamathite signs which would result from the supposition that the phonetic sound is the same as in Egyptian.

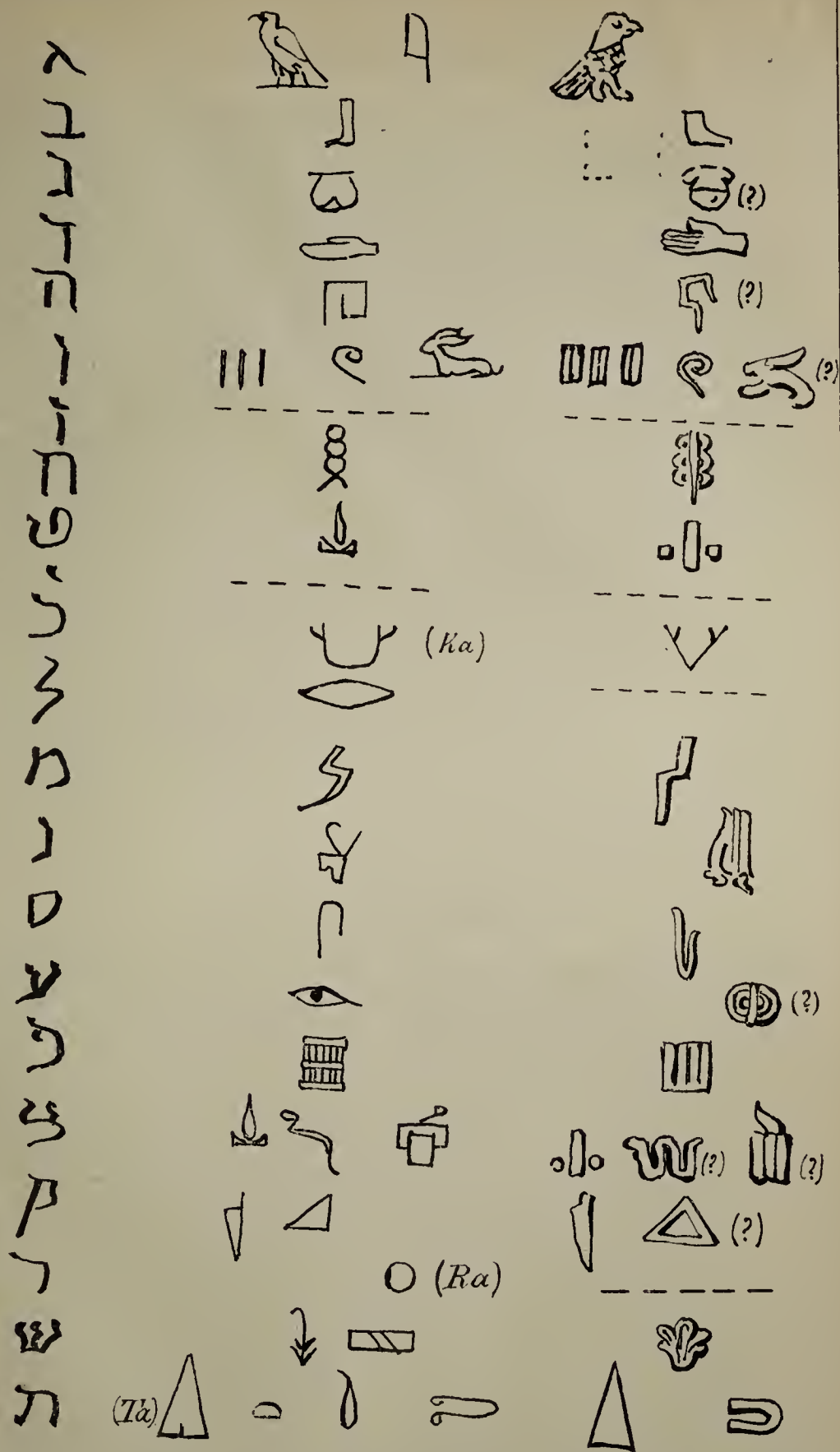
The comparison with the Semitic alphabet was established by Mariette; as regards the rabbit, I still incline to think the explanation possible. Professor Sayce gives us a rabbit from Boghaz-Keui ("Trans. Bib. Arch. Soc.," 1881, p. 257). The use as a suffix (p. 276) would agree with its value as *Vau*.

An interesting suggestion in this matter was made to me by Rev. W. Wright, namely, that the Hittite names on the Egyptian monuments should be compared with the Hamathite texts to see if any of them (personal or geographical) occur.

I understand that Professor Sayce connects the upper of the three symbols here given with the name of a goddess, 'Ate, עתי, worshipped in Northern Syria ("Trans. Bib. Arch. Soc.," 1881, p. 260). Now the combination shown occurs on the texts from Jerâbis three times, and if the Egyptian equivalents are correctly given it would read 'Atu (עתי).



Another suggestion as to these figures may also be hazarded. The two signs here



Comparison of Hebrew and Hamathite, based on Mariette's identification of Hieroglyphic Equivalents for Hebrew Sounds.

C. R. CONDER, R.E., del.

Harrison & Sons, Lith., St. Martins Lane, W.C.

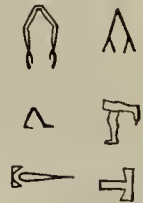
shown indicate a suffix, according to Professor Sayce. According to the attached proposed alphabet, they would read *eth* or *ath* (𐎠𐎢), which might be a feminine noun ending.



I offer such notes as suggestions only, not as proven facts, believing it possible that, either these unread monuments have a common origin with Egyptian, or that the Northern nations borrowed their signs from Egypt itself at an early historic period.

Lieut. Mantell, R.E., has kindly obtained for us a photograph of the wooden texts on the tomb of Hosi ; and Emile Brugsch Bey has kindly given him a squeeze, which has also arrived safely, of the wooden inscription at Sakkarah. The interest of these lies in the fact that they are Archaic specimens of hieroglyphic writing in relief, as in the Hamathite texts. Of the symbols published in the last *Quarterly*, as many as twenty-five are found on these archaic monuments. The comparison of these texts will, I hope, lead to further illustration of the Hamathite.

At present the result of the comparison of the wooden texts with the so-called Hittite ones is the addition of three characters, viz., first *Ka*, the well-known emblem for "spirit," which seems to occur on seals ; secondly, a determinative ; and thirdly, an unusual character from the Sakkarah texts, also found at Jerâbis.



C. R. C.

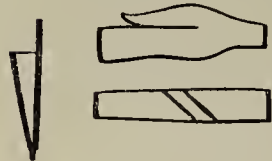
HITTITE GEOGRAPHY.

THE Karnak lists from No. 120 to 349 give a long category of towns in Northern Syria, and Mesopotamia, and possibly in Asia Minor. A few of these now begin to be recognisable, and the following identifications are partly those published by the Rev. H. G. Tomkins and partly new suggestions.

121. <i>Ai</i> , perhaps Kefr Aya, south of Homs	....	....	H. G. T.
122. <i>Amau</i> , or <i>Amatu</i> , perhaps Hamath	....	....	H. G. T.
125. <i>Tharmanna</i> , perhaps Turmanîn	....	....	H. G. T.
157. <i>Khallos</i> , perhaps Killis	....	....	C. R. C.
165. <i>Kanretu</i> , possibly Kinnesrin, near Aleppo	....	....	C. R. C.
189. <i>Nireb</i> , probably Nirab, south of Aleppo	....	....	H. G. T.
190. <i>Theleb</i> , perhaps Edlib	....	....	C. R. C.
196. <i>Nishapa</i> , clearly Nisib, near Bir	....	....	H. G. T.
201. <i>Natub</i> , perhaps Ain Tab	....	....	H. G. T.
203. <i>Aithna</i> , probably Ataniya	....	....	C. R. C.
204. <i>Sukana</i> , probably Sukneh	....	....	C. R. C.
205. <i>Tuaub</i> , probably Taiyibeh (C. R. C.) or Kefr Tob	....	....	H. G. T.
206. <i>Abir</i> (<i>na</i>), <i>th</i> probably Bir (=Birejik)	....	....	C. R. C.

237. *Artha*, probably Aradus C. R. C.
 252. *Sur* appears to be Tyre C. R. C.
 254. *Nuzana* (also noticed with Tyre in the Mohar's journey) seems to be a stream or town by a river, probably the Kasimîyeh.
 280. *Pederi* = Pethor, near Euphrates.
 308. *Amak*, perhaps the present 'Umk plain preserves the name near Antioch C. R. C.
 264. *Karshua*, perhaps Karis C. R. C.
 311. *Khalbu*, = Aleppo

Among the Hittite allies at the battle of Kadesh were the Karkish or Kalkish, whose names may survive at the later Calchis—a town of this name existed south of Baalbek, and another near to Aleppo. The Dapur conquered in this campaign may be *Dibl* east of Tripoli.



In this same connection it may be interesting to note the hieroglyphic characters which denote the famous city of Kadesh. Two at least of these emblems are identical with signs used on the supposed Hittite texts.



In the same connection the name of Kheta Sar, as written in hieroglyphic, is also of interest, including as it does the Egyptian emblems for the name of the Hittites.

C. R. C.

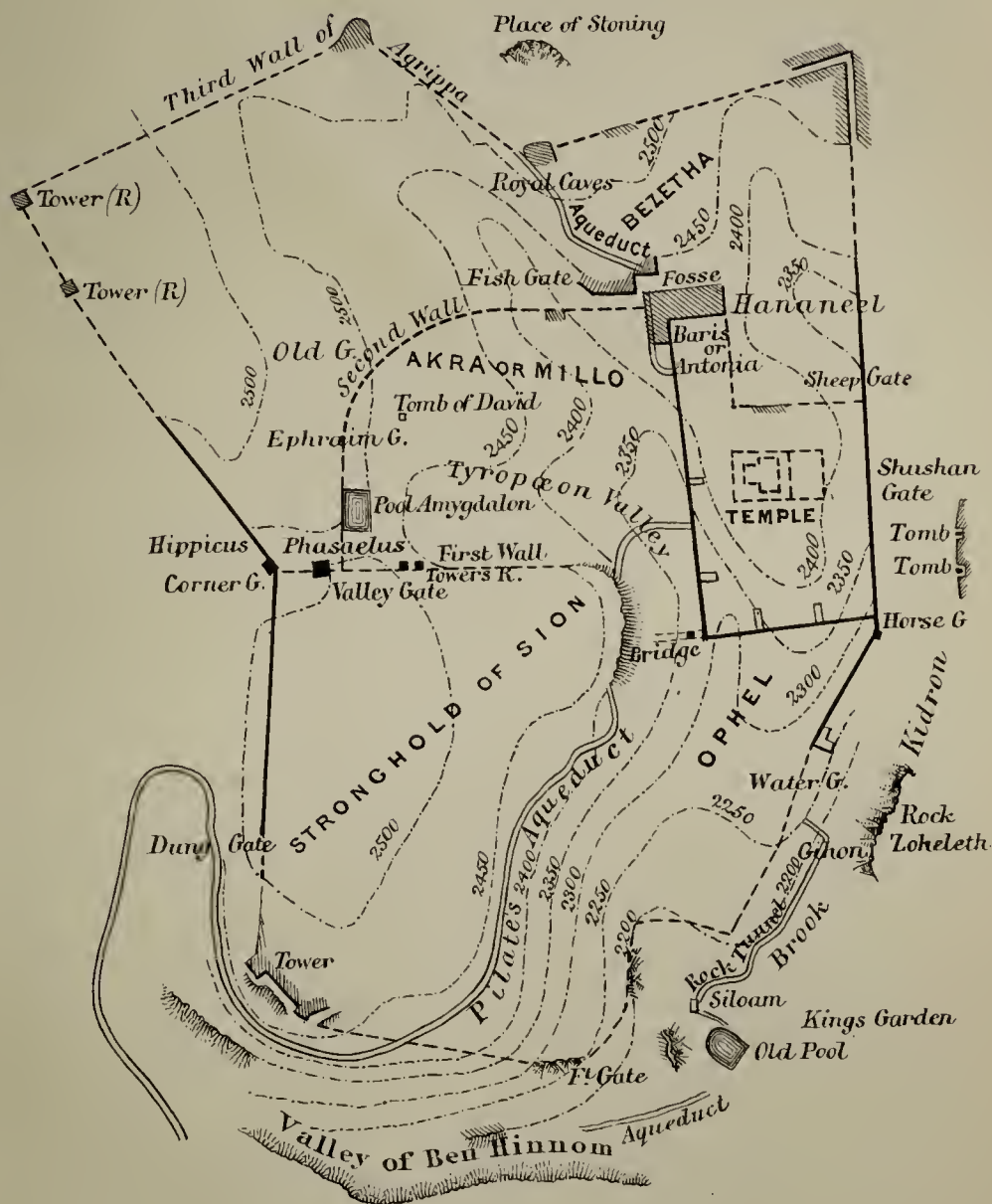
JERUSALEM OF THE KINGS.

WITH due deference to Professor Sayce, and to those who may agree with his views, I should like to be allowed to ask a few questions concerning the sketch and the two papers which he has contributed to the last *Quarterly Statement*. It is, no doubt, possible that the long list of authorities who agree in substance in regarding the Jerusalem of the Old Testament as approximately identical with the modern city may be wrong, and Professor Sayce, who confines its site to the Ophel spur, may be right. I do not, however, gather that any *new fact* unknown to Robinson, Williams, Lewin, Tobler, Thrupp, and Warren is brought forward by Professor Sayce in support of his views, and I think I may say with considerable confidence that there are facts represented on Sir C. Warren's plans and recorded in the reports of the exploring officers which militate very strongly against Professor Sayce's views. As regards these facts, in the first place, I would ask—

I. How is it shown that Dr. Guthe discovered a valley "which sepa-

ANCIENT JERUSALEM.

Showing the Rock Surface & Ruins.



C.R. Conder R.E. del. 1879 A.D.

DR GUTHES' WORK

Site Plan of the principal remains.



C.R. Conder, Capt. R.E.
19. 5. 83.

rated Zion from Moriah?" Laying down the valley shown by Professor Sayce on the Ordnance Survey map, I find that there are a number of known levels along its supposed course. The mines which Sir C. Warren sank to the rock on Ophel in this vicinity (Nos. 8, 9, 14, 25, 38, &c.) give us far more detailed knowledge of the rock in this position than can be gathered from anything published by Dr. Guthe. The mines which Dr. Guthe drove I was courteously allowed to examine, and to me it appears perfectly certain that the work done was not sufficient to allow of any conclusions being drawn which in any way might be placed on a footing with the work of the English Society. It is greatly to be regretted that Dr. Guthe has never published any site plan of his works, but this deficiency I have endeavoured roughly to supply. It is also to be regretted that no levels appear to have been taken in his mines which might definitely fix the height of the rock where he uncovered it; but, on the other hand, we already possess so many observations as to render it impossible to suppose that any valley such as that shown on Professor Sayce's sketch can ever have existed. The rock was found by Dr. Guthe at the points *D* and *E* (see attached site plan), so near the present surface that, although no levels were obtained, his results only served to confirm those already reached by Sir C. Warren. It may therefore, I think, be considered proven that no valley dividing the Ophel spur in twain exists, and that any theory founded on this supposition is unsound. The geological evidence might be found to agree with the preceding arguments, but the rock as found by Dr. Guthe alone is sufficient to condemn the theory.

II. How is it shown that Dr. Guthe recovered the walls of David and Solomon? I was allowed to examine the masonry he uncovered at various points, and, judging by that which I have examined in other ruins in all parts of Palestine and Syria, I should feel no hesitation in saying (without intending any disrespect to Dr. Guthe) that he had recovered the remains of houses and other buildings not older, in all probability, than the fourth century A.D. It was not a mighty rampart, such as that planned by Sir C. Warren on Ophel, that Dr. Guthe found, but much thinner walls of comparatively small ashlar—the foundations, in fact, of those monastic and other buildings which we know historically to have occupied this spur in the early Christian centuries.

It appears, in short, to be assumed that the Ophel spur has, as yet, been but little explored. The fact is, however, that the northern part was very thoroughly examined by Sir C. Warren, and that there is but very little *débris* on the southern part, which has been again and again visited and examined by various explorers, including M. Clermont-Ganneau. In 1872 I reported on the remains of rock-cut aqueducts visible on the surface, and since destroyed by quarrying, and on Sir C. Wilson's survey the rock will be found showing on the surface in many parts of the southern portion of the Ophel spur. It appears to me that theories which take no account of these varied observations can hardly be regarded as of great value.

III. Proceeding next to the considerations which are more purely theoretical, I would draw attention to the legitimate outcome of Professor Sayce's sketch when compared with the Survey of Sir C. Wilson. If the supposed valley be traced on the Survey, it will be found that the area within the walls south of this line, according to Professor Sayce's sketch, is not larger than 8 English acres. This is a good deal smaller than Lincoln's-Inn-Fields, and considerably smaller than the base of the Great Pyramid. The courts of Herod's Temple occupied about four times this area, and an ordinary English field is generally larger than Professor Sayce's Jerusalem. This was the City of David according to the new theory, the northern part of the spur being Ophel. The capital of Syria, in David's time, occupied consequently only 8 acres, and in the time of Manasseh, when Ophel was included, it still only occupied about 15 acres. The Jebusite village which Professor Sayce proposes (for the first time) to place on the Temple-hill was, he informs us, cleared away by Solomon.

With regard to these facts, two questions may be asked, which are as follows :—

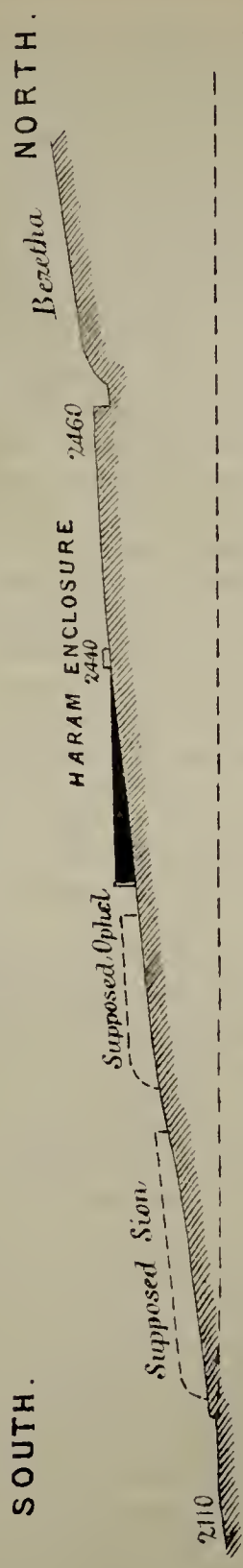
Is there any good reason to suppose that the capital of David's kingdom was a village only about a third the size of any ordinary Fellah hamlet of modern Palestine? Can any ancient city be pointed out by Professor Sayce whose walls only included an area of either 8 or even of 15 acres? Certainly in Palestine we never found an ancient town of such minute size, and unless authentic plans can be produced of famous cities occupying such an extent, we are justified, I think, in considering this a very important objection. For purposes of comparison I here give the areas of various cities of which good plans exist, and the differences will, I think, at once strike the reader :—

					Acres.
Cæsarea (within the Roman walls)....	....	....	....	....	300
The Hill of Samaria (within the colonnade)				....	160
Rabbath Ammon	{ upper city 29 acres }			....	60
	{ lower city 31 „ }				
Gerasa (Roman walls)	....	....	....	....	200
Tyre (the island town only)....	....	....	....	....	100
Gezer (the hill site only)	....	....	....	....	40
Jerusalem, in 30 A.D.	....	....	....	....	200
„ in 70 A.D.	....	....	....	....	300

No comparison is, of course, possible with such huge cities as Thebes, Memphis, Nineveh, or Babylon. Nineveh (see Smith's "Assyrian Discoveries," p. 87) had, according to modern plans, an area of 2,500 acres. Babylon (see Professor Oppert's plan) was 12 miles square (72,160 acres). Modern London, we may note, occupies 700 square miles, with $4\frac{3}{4}$ million souls of population. The usual size of a modern Fellah village is from 20 to 40 acres, but Jerusalem was a capital, and a place at least as important as Tyre on its island. David's conquest extended over at least 15,000

SECTION OF OPHEL & TEMPLE HILL.

Natural Vertical Scale.



C. R. Conder, Capt. R.E.
12. 10. 83.

square miles of country. Solomon was married to the daughter of the Pharaoh, and was allied as an equal with Hiram the Phœnician. The city was so strong that even the great King of Assyria was unable to take it, and Nebuchadnezzar laid long siege to it before he conquered it. In later times (probably in Hezekiah's reign) the civilisation of Jerusalem was so advanced that a fine inscription was carefully cut on rock to record the making of the Great Siloam Tunnel.¹ Surely all that we know of Egypt and of Assyria directly contradicts the supposition that a capital like Jerusalem can only have occupied an area of 8 acres.

The second question connected with the matter of the area regards the history of the city. Professor Sayce speaks, it is true, of præ-exilic Jerusalem, but his sketch applies to the Jerusalem of Nehemiah, and his quotations are taken from the Books of Ezra and Nehemiah quite as often as from earlier writings. It follows, then, that down to about 300 B.C. the city still did not occupy more than 15 acres in area, yet in the time of Christ, as Professor Sayce will, I think, agree, the hills west and north of the Tyropœon Valley had become covered with buildings, and were included within walls. When did this great increase of area take place? Jerusalem in 30 A.D. occupied 200 acres, but as between 200 B.C. and 140 B.C. the whole country was undergoing great troubles, and the capital was often in ruins for some considerable time, we cannot well suppose it to have begun to grow in size until the time, at earliest, of the Hasmonean kings. Is it possible, I would ask, that in 200 years an Oriental city increased from 15 to 200 acres, and if so astonishing a growth occurred, how is it that we have no record of it, and no notice of the real builders of the new walls which Josephus ascribes to David, Solomon, and succeeding kings?

IV. Hitherto we have considered this question from a purely practical point of view, comparing Professor Sayce's sketch with the Survey, and with the results of exploration, and indicating the inevitable consequences of the new theory. No reference has been made to the accounts given by ancient writers, or to the words of the Bible narratives. It is well known that Professor Sayce values Josephus and Herodotus also at a very low estimate, and that he also values the Book of Chronicles in the same way, accusing the author of "loose wording," and "confusion" (*Quarterly Statement*, pp. 212, 221).

What is here said will, therefore, have weight only with those who

¹ It will be best not to complicate this inquiry by entering into the question of the date of the Siloam Inscription. Dr. Isaac Taylor has published the views which result from his special study of the alphabet (cf. *Alphabet*, Vol. I, p. 238), and his opinion must carry very great weight in the matter. He concludes that the text may possibly be as old as Hezekiah's time, but he is himself inclined (p. 237) to regard it as not earlier than Manasseh. The arguments as to the forms of certain letters which he adduces appear to me entirely to preclude the possibility that the text is, as Professor Sayce now suggests, as old as Solomon's time.

believe that writers who described what was before their own eyes are more likely to have been right than students who eighteen centuries later endeavour to reconstruct ancient cities by the aid of certain selected expressions or passages in the writings of the authors in question.

As, however, Professor Sayce makes use of the Bible narratives, he may, perhaps, attach some value to certain passages which are not mentioned in his papers, and although he does not accept the evidence of Josephus as having any accurate value, it seems impossible to suppose that he is prepared entirely to reject the general statements of that author. I propose, then, to consider the Biblical statements as to the population of Jerusalem, and the account given by Josephus as to the walls.

As regards *population*, it is stated (2 Kings xxiv, 14) that Nebuchadnezzar took captive "all Jerusalem . . . ten thousand captives . . . none remained save the poorest." Either this statement must be explained away, or we must suppose a density of 1,000 souls per acre, giving only $2\frac{1}{2}$ yards by 2 yards per soul. Modern Jerusalem has a population of 20,000 souls within the walls in 200 acres. Modern Jerusalem is a very crowded city, but Professor Sayce's Jerusalem, if the Book of Kings is correct, had ten souls in the same area now occupied by one.

Ezra brought to Jerusalem 1,496 males (or 3,000 souls) in addition to the population which previously existed, which might be deduced to have been about 9,500 souls (Ezra ii, 64, and viii, 3-14) out of 42,360 exiles who came back to Judea. We have thus a population of at least 3,000, and probably of 12,000 in Ezra's time, yet in the Book of Nehemiah we read: "The work is great and large, and we are separated upon the wall one far from another" (Neh. iv, 19); and again, "Now the city was large and great, but the people were few therein" (vii, 3). Again, rather later, a tenth of the village population (that is, 3,000 to 5,000 souls) is brought into the town (Neh. xi, 1; cf. vii, 66), giving a population of at least 10,000 souls as before the siege—a total which, as before shown, could not be the population of a town of 15 acres.

Taking an average from many towns and villages, we may state 100 souls per acre as the normal population of any Syrian city; ancient Jerusalem possessed open spaces (רחב) and a royal palace and a governor's house (Ezra x, 9; Neh. iii, 7; viii, 1 and 16; xii, 37). The maximum of population, according to Professor Sayce's view, would thus be 800 souls in David's time, and 1,500 souls in the later days of Manasseh or of Ezra. Not only does this disagree with the Bible, but the result seems clearly impossible, considering the extent of Solomon's dominions and the size of ancient Asiatic capitals.

If, on the other hand, we accept the views of Sir C. Warren and Mr. J. Fergusson as to the extent of the ancient city, we shall obtain results in perfect accord with the Bible statements of population.

The areas are as below :—

							Acres.
Upper city	....	....	....	....	....	....	140
Lower city	....	....	....	....	....	....	45
Ophel	....	....	....	....	....	....	15
Total....							200

The normal population would be 20,000 souls, and when the city contained only some 5,000 souls it might consequently well be considered very empty. The Biblical statements as to population are consequently in favour of the general opinion, and not of the new theory.

As regards the testimony of Josephus, I have only to ask, Why is the following statement unworthy of credence ?

“Now of these three walls the old one was hard to be taken, both by reason of the valleys, and of that hill on which it was built, and which was above them. But besides that great advantage as to the place where they were situated it was also built very strong ; because David and Solomon and the succeeding kings were very zealous about this work. Now that wall began on the north at the tower called Hippicus, &c., &c.” (5 “Wars,” iv, 2).

Has Professor Sayce considered this passage ? Is he prepared to prove that this “old wall” is his wall, and that Hippicus was on the Ophel hill ? or does he reject the whole account of Jerusalem given by Josephus ? I do not think he will find it possible to reconcile Josephus with his theory. The attempt has been made long since to do this, and to place Akra on Ophel, and it has always been found to lead to helpless confusion of the topography, and to final denial of some or other statements of the ancient accounts. We must then glance for a moment at the question of the Akra.

V. Sir C. Warren and Professor Sayce agree in identifying Zion and Akra and the City of David as all three one and the same. We may assume, then, that this view rests on good grounds, which it is unnecessary here to detail. Sir C. Warren, however, writes these names west of the Temple, Professor Sayce at the end of the Ophel spur. I think no student can read Josephus without seeing that the former view is correct. A “broad valley” separated Akra from the Temple (5 “Wars,” iv, 1), and such a valley exists between the two as identified by Warren, Robinson, Conder, &c. ; but we have seen that it is proved that no such broad valley ever cut in two the Ophel spur. Of the levels we will say nothing, for Akra was cut down by the Hasmoneans ; but the “broad valley” noticed by Josephus has no existence, according to the view of Professor Sayce.

VI. We must now say a few words on the facts which really lie at the root of the new controversy. It has come to be generally allowed that the view which I have advocated as to the position of Gihon is correct, and Professor Sayce adopts my identification with the so-called Virgin’s Fountain. But does it therefore follow that the great aqueduct to Siloam is intended in the passage where Hezekiah is said to have brought the

water down "on the west side of the City of David?" To me it appears that the Siloam Pools are on the south rather than on the west of the spur, where Professor Sayce places the City of David. Until the year 1881 I was always unable to explain the passage in question to my own satisfaction, but during that year I reported on the aqueduct found by the Fellahin leading away westwards from the Siloam Pools on the slope of the western hill now called Zion. We ascertained the levels of the channel, and its antiquity is shown by the great accumulation of *débris* above it. As it was found after Professor Sayce's visit, it may have escaped his notice, for it is not mentioned in his paper. If the term "City of David" (*i.e.*, the capital of David's time) were applied, as I believe it should be applied, to the two western hills (the Upper City and Akra of Josephus), the discovery of this aqueduct would, I think, be found to explain the difficult passage (2 Chron. xxxii, 30) more completely than it can ever be explained on Professor Sayce's theory.

The question of the position of the Tombs of the Kings is intimately connected also with the new theory. To me it appears quite clear that two royal cemeteries existed. The first was in the City of David, and the more famous Kings of Judah were buried in it. It seems to me most probably to be the ancient Jewish tomb still existing immediately west of the traditional Holy Sepulchre. This theory I have often explained in detail, and it has met with acceptance by many. But of Ahaz we read, "They brought him not into the sepulchres of the Kings of Israel" (*i.e.* David, Solomon, and Rehoboam), 2 Chronicles xxviii, 27. Uzziah was buried in his own garden (probably the "garden of Uzzah"), and Manasseh and Amon appear also to have been excluded from the original cemetery. If we suppose the garden of Uzzah to have belonged to the royal palace on Ophel, we obtain a second royal cemetery, to which allusion appears to be made in the Book of Nehemiah, and I believe it will be found that every passage in the Bible is satisfied by this view, without its being necessary to place the City of David in a practically impossible position.

These two explanations as to the aqueduct and the tombs will be found to dispose of all the real arguments as yet brought forward in favour of the new theory, and I may perhaps be allowed to say that I endeavoured, before publishing my views as to ancient Jerusalem, to weigh these arguments impartially while coming to a conclusion.

VII. Professor Sayce's views as to the history of the various pools agree in great measure with those which I published in 1879, in the "Handbook to the Bible." There is, however, a good deal that must remain conjectural. We do not really know where the Fuller's Field was, although Professor Sayce's view as to the upper and lower pools is identical with that which I have published.

The argument as to the date of the Siloam aqueduct seems to me, however, to fail entirely. In the first place, is it necessary to conclude that "the waters of Shiloah that go softly" (Isa. viii, 6) were running in an aqueduct? May they not have run in an open stream down the valley?

In the second place, when we reflect on cases like those of Adullam, Keilah, Shiloh, &c., it becomes quite clear that it is not necessary to suppose that ancient fortresses were always fixed close to springs. The strongest position was chosen, and if water did not occur within the walls cisterns were hewn. It is hardly necessary to prove this in detail, but the amount of available evidence is quite conclusive in the matter.

I have failed to find any passage in the Bible which can be considered to contradict the direct statement of the chronicler, according to which the Siloam Tunnel was hewn by Hezekiah, and I therefore offer the following proposed history of the Jerusalem pools, which appears to reconcile all the Biblical passages without the necessity of supposing "that the chronicler has confused" distinct localities. According to my view we should suppose—

1st. In the time of Ahaz, a spring (Gihon) with a stream down the Kedron, and two pools for rain-water (upper and lower), with a rock conduit (still existing, as do the pools) joining the upper to the lower.

2nd. In the time of Hezekiah, the construction of a new pool *at the spring*. The cave pool of the Virgin's Fountain is evidently artificial, and was probably cut at the same time as the aqueduct. This is the "pool" that was made by Hezekiah, where only a natural spring before existed. At the same time Warren's shaft was cut in order to "bring water into the city" by its means, and the Siloam aqueduct was excavated and *was continued beyond the pool westwards on the slope of the hill of the upper city, which was the stronghold of Sion, and part of the City of David*. Even these alterations did not bring the spring of Jerusalem within the walls, although the Siloam Pools were close to the ramparts. Jerusalem always largely depended, even in its best days, on the great reservoirs described by Josephus and Tacitus. It follows from this view that the Siloam Inscription cannot be older than Hezekiah, and this agrees with the strong epigraphic arguments of Dr. Isaac Taylor respecting the date of the text.

VIII. In conclusion, a few details ought to be separately noticed. The valley-gate and the dung-gate were 1,000 cubits apart. On Professor Sayce's plan, when applied to the Survey, they will be found to be 300 cubits apart, and I think he will find it very difficult to give the required distance, without hopelessly crowding the other points on the wall. The circumference which he supposes is, in fact, too small to agree with these measurements. Professor Sayce's plan also requires us to suppose two gates both called "the corner gate." According to my plan all the references can be applied to one gate. The corner gate was 400 cubits from the gate of Ephraim, along the wall (2 Kings xiv, 13). Professor Sayce's plan makes it only 200 cubits distant, and the reason is clearly, as before, that his wall is too short to allow space for the gates.

Professor Sayce follows the Crusaders in placing En-rogel at the Bîr Eyûb. The discovery of Zohelath induced Sir C. Warren to place En-rogel at the Virgin's Fountain—the only true *En*, or spring, at Jerusalem (*cf.* 1 Kings i, 9). As to Zohelath, I am prepared to show the radical identity of the Arabic and Hebrew words which M. Clermont-Ganneau

has compared, and to account, on dialectic grounds, for the presence of the *Wau* in the Arabic form of the name *Zahweileh*, which has the same meaning as the Hebrew *Zohelath*, and the same tri-literal root.

Professor Sayce says that the sheep-gate is mentioned in John v, 2. This is true of the English version, but Professor Sayce is no doubt aware that all ancient authorities regarded the *Probatike* as being not a gate at all, but a pool.

As regards the chronicler's account of the Ophel wall, Professor Sayce considers that his wording is "somewhat loose" (p. 221). The chronicler says that Manasseh built a wall "without the City of David" (לְעִיר חִיצוֹנָה), on the west side of Gihon, in the valley. Professor Sayce appears to think that he meant to say "round the City of David." This may be necessary to the new theory, but the old theory fits exactly with the distinct meaning of the Hebrew words, and the chronicler had at least this advantage over the modern student, that the walls were then standing before his eyes.

The Hebrew particle לְ is rendered "on" by Professor Sayce in two passages (2 Chron. xxxii, 30; xxxiii, 14); why, then, is it rendered "from" in another passage (Josh. xv, 9), where the Authorised Version reads "unto?"

I think that if Professor Sayce will consider the whole question of the boundary of Judah (Josh. xv and xviii) he will agree in running the line further south than he at present proposes to do, and that the generally accepted reading of the Hebrew will be found satisfactory. It certainly agrees with established views as to Jerusalem topography, though not perhaps with the new theory.

Finally, I would ask if Solomon cleared away a city of Jebusites in order to build his Temple, as Professor Sayce supposes, is it not remarkable that no hint of this arbitrary act is found in the Old Testament?

We read of David and Solomon as rebuilding the Jebusite town, and as buying an open threshing-floor as the site of the Altar; we hear nothing of destruction or of the two towns, upper and lower, divided by a district only afterwards occupied and called Ophel. On Ophel Solomon built his palace, and this, as we learn distinctly, was outside the City of David (1 Kings ix, 24).

With Professor Sayce's topography on the east I for one must in the main concur. His plan will be found to coincide with that which I published in 1879 ("Handbook to the Bible"), in almost all the details on this side, and some of those details I think I may claim to have been the first theorist to assign to the positions which Professor Sayce adopts. As regards the topography on the west side, I think that after considering the explanations now offered on the points which really induced Professor Sayce to adopt his present views, I may rely on him to reconsider his position. The impartiality of Professor Sayce and his constant effort to keep his mind open on doubtful questions are very well known. I hope he will weigh the suggestions I have ventured to offer concerning area and population, concerning the history of the pools and of the aqueducts, concerning the information which we possess as to the levels on the Ophel

spur, and concerning the two royal cemeteries mentioned in the Bible. He may, perhaps, even do me the honour of reading the account which I have endeavoured to give in the "Handbook to the Bible" concerning our present knowledge of ancient Jerusalem, and I know that if, on reading these remarks, he should become convinced that the generally accepted theories are really the simplest (and they have been very carefully thought out by many experienced and able writers), we can rely upon his expressing his adhesion to the views of the majority, including such names as Robinson, Fergusson, Williams, Lewin, and Warren.¹

C. R. CONDER, *Captain, R.E.*

DISC STONES.

I MUST thank Dr. Selah Merrill for correcting our measurement of the Mensef Abu Zeid by 10 inches. I have no doubt he is right. The stone in question weighs, probably, some twenty tons, and for this reason I do not agree with Mr. Merrill in regarding it as a millstone.

There are two kinds of millstones commonly used in Syria. Those for grinding corn, which are large and made of basalt, and those belonging to olive-presses, which are small and made of limestone. A limestone block would not, I think, be hard enough to grind corn, and for this reason the basalt stones imported from the Hauran are much prized. There is no doubt a danger of mistaking a modern utensil for an ancient emblem. Even Dr. Schliemann did not escape this danger. On the other hand, the surveyors had seen very many millstones which they could compare with the Mensef, but never, I think, did they find a horse or donkey who could have turned this great disc stone in a mill. I have lately found an instance of disc stones which are clearly solar emblems, namely, the twin disc stones of Killiney, co. Dublin. The 'Amrit disc stone is just about the size of the Mensef, and the disc stone with a central obelisk is a well-known emblem to Oriental archæologists. Such antiquities are not, however, I believe, found in America.

C. R. C.

¹ Sir C. Wilson's name will no doubt in time be added to that of other authorities when he has time to publish his views. At present, however, we can only appeal to his Survey and Memoir, as he has not expressed an opinion on the questions now under consideration.

PILLAR OR GARRISON ?

THANKING H. B. S. W. for his support on this question, and, without wishing to insist on an interpretation which may be doubtful, I would note that his argument as to the verse "the garrison of the Philistines went out" (יצא מצב) is apparently inconclusive, because this verb is used of inanimate objects, in a manner which seems to support my view. Thus we read in Joshua xv, 3, 9, &c., יצא הגבול "and the border went out," in the sense of extended. My idea is, that the Philistine border was marked by a cippus, or menhir, which Jonathan smote, and that, having obtained possession of Geba, he forced the Philistines to retire across the valley, and to establish themselves at Michmash. This border—no doubt protected by an outpost called "the men of the garrison" (xiv, 12)—then "went out," or "extended only as far as the "passage of Michmash" (xiii, 23), and the desecrated menhir may have been here erected anew. The passage has always, I believe, been considered difficult, and "garrison" is by no means the general reading. "Standing camp" (in the margin), "governor," "boundary" (Speaker's Commentary), and other renderings have been suggested ; but as to the general reading of the words מצב and נצב (the Arabic *Nusb*) there is no doubt whatever ; and H. B. S. W. has shown clearly how hasty is Mr. Birch's assertion, "It is an entire mistake to say it is rendered pillar in other passages of the Old Testament." My view was derived from a study of the Speaker's Commentary, which renders מצב by "boundary."

C. R. C.

 THE KHURBETS OF CARMEL.

THE accurate delineation of Mount Carmel in the Society's map, will in all probability have corrected the idea hitherto widely but erroneously entertained in regard to this historic locality. We are now able to realise that Carmel is not an isolated mountain, but a highland region, about thirty-five miles in circumference, with various ranges cut up by narrow gorges, or broader valleys, and diversified by lofty spurs, rounded summits, and level or undulating plateaux. The explorer is thus furnished with a district through which he may wander with the pleasing consciousness that he will not speedily exhaust its picturesque or archæological points of interest, but may at any moment unexpectedly stumble upon the sites of ruined towns, or feast his eyes upon new beauties

of scenery. Indeed, it is impossible once more to supply, in imagination, this region with the population it must have contained in former ages, without realising that it possessed all those attributes which rendered its loveliness proverbial. The massive ruins which are so abundantly strewn over its loftiest summits, the traces of terraces which cover every hill-side, the gigantic roots of old forest trees, long since departed, which crop through the soil, the remains of mills, reservoirs, and cisterns, which bear testimony to its wealth of water, all furnish evidence that the highlands of Carmel once supported a large civilised population, and that it has been subjected to a very high degree of cultivation. With the conquest of Palestine by the Arabs, about the middle of the seventh century, the beauty of Carmel doubtless began to fade ; still it is probable that it retained some of its leading characteristics until the end of the thirteenth century, when, on the expulsion of the Crusaders, it lapsed once more under the influence of Islam. We have no clear historic record of the conditions of the mountain from the year 1291, when the Carmelite monks were driven from the monastery, till the middle of the seventeenth century, when they recovered their position ; but it is probable that it was almost completely uninhabited for about 300 years. It was in the early part of the seventeenth century that the Druse Emir Fakr-ed-dîn, having conquered Beyrout, and the coast towns to the south of it, extended his sway as far as Carmel, and under his rule were established the eight Druse villages, of which two, Esfia and Dahlieh, alone exist. The other six, the remains of which I have visited, were all built on the sites, and with the stones of ancient towns. They are--

Khurbet Beistan,
 „ Umm esh Shukf,
 „ Shellâleh,
 „ Duweimîn,
 „ Duweibeh,
 „ 'Aleiya-eddîn.

Besides the population contained in these villages, there were a few Druse families scattered over the mountain in hamlets. As the sites of these villages were the most eligible, it is probable that when Fakr-ed-dîn appropriated the mountain there were no inhabitants in it, or they would have been occupied—the more especially as, except the two which remain, the mountain is again abandoned ; for the Moslem villages of Belad esh Sheikh, Tireh, Umm es Zeinat, Tsjim and 'Ain Haud, which own lands in the mountain, are all situated at its foot, with the exception of Umm es Zeinat, which is on a lower range of hills to the south-east, below the Makkraka. There are no Moslems actually on Carmel proper. Its entire population consists of about 800 Druses, divided between the two villages of Dahlieh and Esfia and fifty Christians of the Melehite sect, who live at the latter place, and the monks in the monastery. The Druses of Dahlieh are of a somewhat superior type to those of Esfia, having come direct from the neighbourhood of Aleppo, the original cradle of the Druse nation.

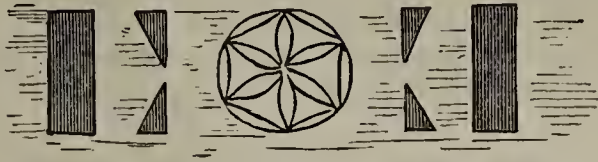
Dahlieh is the most southern Druse village in Palestine. The inhabitants of Esfia, and the remaining Druse villages now deserted, were all from the Lebanon. The tyranny of Ibrahim Pacha during the Egyptian occupation of Palestine, and the lawless and predatory habits of the inhabitants of Tireh and Tsjim especially, rendered the mountain untenable, to a great extent, by the Druses of the six villages I have enumerated, and one by one they were abandoned, their inhabitants for the most part taking refuge in the Jebel Druse to the east of the Hauran. There remain, however, within sight of Esfia, fourteen Druse villages on the southern slopes of the northern hills of Galilee, and their Sheikhs pay annual visits to their brethren on Carmel. It is manifest that the Crusaders had military posts on the mountain, and built their forts with the materials which a bygone population had left behind them, leaving their own traces in the carvings which bear evidence of the Crusading period. The fragments of columns, carved capitals, and architectural remains still to be found, prove that Roman civilisation once had a foothold here, while the remarkable Jewish vestiges till lately existing at Khurbet Semmaka (see "Memoirs," Vol. I, p. 318), and the quantities of tombs with which the hill-sides near some of the Khurbets are honeycombed, give evidence of the large Jewish population by which it was inhabited from a remote antiquity.

I spent two months last summer at Esfia, which according to the Survey has an altitude of 1,742 feet above the sea, and found the difference between its temperature and that of Haifa quite sufficient to justify its selection as a summer resort, the thermometer between the middle of July and the middle of September rarely rising above 80° in the house in the middle of the day, and usually falling to 70° at night in the tents. It was during this period that I made the excursions in the neighbourhood, the notes of which are contained in the following pages. I have thought it best to make sketches of all the devices and carvings that I found, as they may possess a value of which I cannot judge so well as those more learned in matters of antiquarian and archæological research. The names of the Khurbets which are not marked in the map I have given in Arabic.

Khurbet Dubil.—These remains cover a larger area than any others which I have visited, and would seem to indicate a place of importance. They crown an eminence in the neighbourhood of Dahlieh, and are marked in the Map (Sheet 5, J i). Many of the stones, of which the walls still standing, to a height of 8 or 10 feet, are composed, measure 4 feet by 2½ feet by 18 inches; while some, which had evidently been lintels or jambs for doors, measured from 7 to 10 feet in length, by 4 feet in breadth, and 2 feet in depth. On one of these, measuring 9 feet in length, was the following device :—



From a smaller one I copied another piece of ornamentation :—



I also found, almost concealed by thick brushwood, what at first sight appeared to have been a chamber hewn out of the living rock. It had been roofed with four stone slabs, two of which had fallen in, measuring 12 feet by 3 feet by 18 inches in depth. The chamber was thus 12 feet square. The sides hewn from the rock were about 12 feet high, measuring from the rubbish which had accumulated, and which was covered by a dense undergrowth ; but it was probably originally much deeper.

I am now inclined to think that this excavation was originally a cistern, of which one side had been formed by a wall, the stones of which have since been carried away. I also found two upright stones, about 4 feet apart, and $3\frac{1}{2}$ feet high, and on the face of each had been cut two slots, 6 inches wide at the top, 9 inches at the bottom, 2 inches deep, and 2 feet long ; in the centre of each was a hole 3 inches square, perforating the entire stone, of which an illustration is given below. These were probably the bases



upon which were fixed upright posts, which supported an olive-crushing apparatus. Also two large nether millstones, 6 feet in diameter, perforated in the centre by a hole 8 inches square. I found another of these on which half of the upper stone was still lying, which was $4\frac{1}{2}$ feet in diameter, and 18 inches thick. Scattered among these ruins were several rollers similar to those discovered by the Survey at Khurbet Semaka, and which are thus described : "They are of limestone, about 3 feet in diameter and 7 feet long. There are on the sides four vertical lines of sunk grooves, four or five grooves in each line. It was supposed that these columns, which

weigh about two tons (taking 2·7 as the specific gravity of the stone) were used for crushing olives." ("Memoirs," Vol. I, page 318.)

There were also many cisterns and tombs. I visited a number of the latter, of which the following were the most worthy of notice :—

One with two chambers 7 feet square, the inner chamber containing two loculi ;

One, 15 feet square, with four kokim on each side, and two loculi with arcosolia. At the entrance to this cave was a circular stone, like a millstone, which moved in a groove, and which, with a little clearing away of the rubbish, might have been rolled across the square entrance, which is still half closed ;

A large cave, 20 feet square and 7 feet high, containing four kokim, two loculi, partially destroyed, and a small pit, about 6 feet deep, and 3 feet square ;

A tomb, with nine kokim, three on a side ;

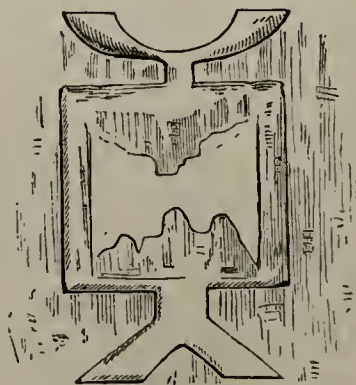
A tomb, with six kokim and a loculus ;

A tomb, with seven kokim and a loculus ;

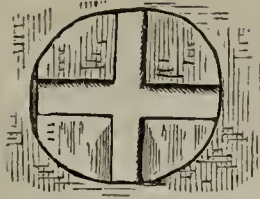
A tomb, the handsomest of all, with five loculi, the sides high like those of sarcophagi ;

besides many others of less interest, and in a less perfect condition.

Khurbet Duweimin (Sheet V, J h).—These ruins are of great extent, and are so much overgrown that they are difficult of examination. I found, however, one sarcophagus and two sarcophagi lids ; a fragment of a column erect, 3 feet high and 2 feet in diameter ; a fragment of a prostrate column of the same size ; two lintels in position across doorways, 7 feet by 2½ feet by 18 inches ; a stone slab, 6 feet by 2½ feet by 18 inches, which had been elaborately carved, but which was so weatherbeaten that it was impossible to make out the device which had been engraved on what appeared to have been a tablet in the centre, but of which the following is a drawing :—



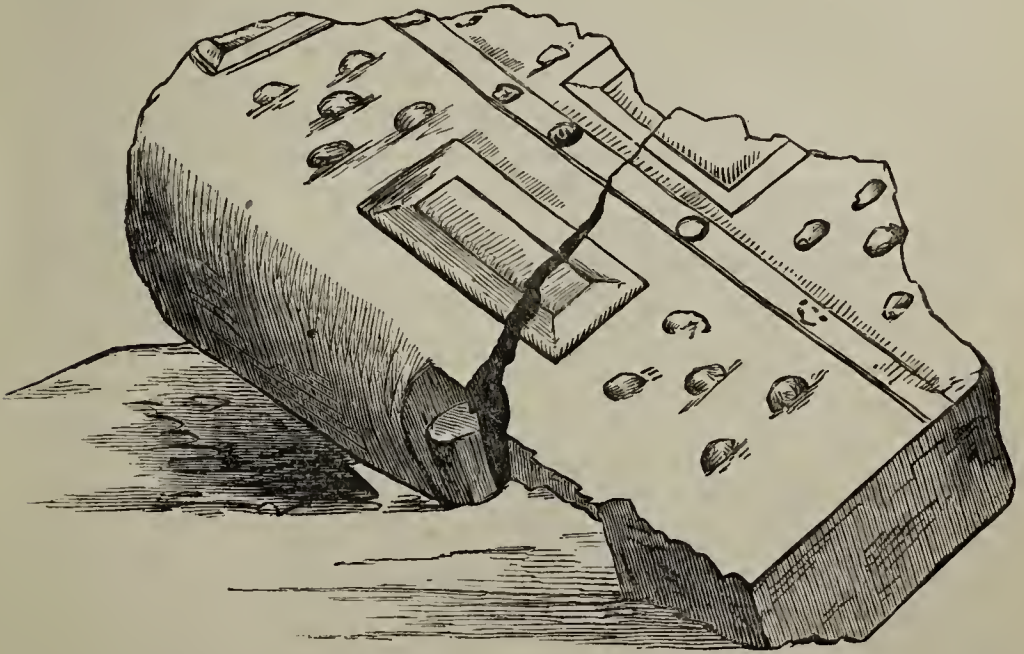
Two slabs, 7 feet long, each containing a carved circle 2 feet in diameter with a cross in the centre.



I found several cisterns, but only two tombs worthy of notice. One, entered by a flight of three steps, which contained four loculi, with arcosolia; and another, with a fragment of a slab, on which was a simple carving, which probably formed part of the door, containing three loculi, with arcosolia.



I have also visited several cave-tombs in the vicinity of Esfia, one containing eight kokim, and another with four. Near the former is also the slab which formed the doorway, carved thus :—

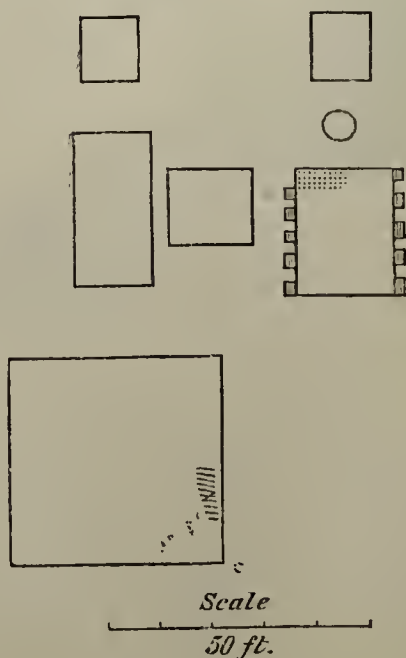


Khurbet 'Aleiya-eddîn ^ع_{عليه الدين} —This ruin is situated on a rising

ground a few hundred yards to the left of the path from Esfia to the Mukkraka, at a distance of two miles and a half from the former place. It covers an area of about four hundred paces by three hundred, and consists of the usual remains of walls built of massive stones from 4 to 5 feet long by 2 or 3 feet wide, and 18 inches thick. Some of these walls are standing to a height of 12 or 14 feet, and in one of them is a window $3\frac{1}{2}$ feet by $2\frac{1}{2}$ feet, with sockets hollowed into the stone on both sides. I also found what appeared to have been the fragment of a column $3\frac{1}{2}$ feet in diameter, and 3 feet in length, but it may have been a round mass of

stone used for some other purpose, as there were no other similar fragments near it. There were also two circular stones 5 feet in diameter. In the centre of each was a hole 18 inches deep, which, however, did not penetrate the stones. As these were partially buried, I could not ascertain their thickness. The holes were 18 inches square, and 6 inches from the surface had been hollowed to a depth of 2 inches round two sides, making a sort of recess round these two sides a foot high and 2 inches deep. These stones were 30 or 40 yards apart; it is possible they may have formed part of an olive-press. About a hundred yards from this I found a mill-stone, $4\frac{1}{2}$ feet in diameter, and 18 inches thick, with a hole perforating it 8 inches square.

The most remarkable feature of these ruins was its cisterns and reservoirs. From the number and extent of these the population must have been entirely dependent upon them for its water supply. Besides nine large rock-hewn tanks, I counted twelve of the usual bell shape, with the small circular orifice. Over one cistern, 8 feet square, which was hewn out of the living rock, and was 10 feet deep to the *débris* with which it was probably now half filled, was an arch of seven stones, which averaged in size 3 feet 6 inches by 2 feet 6 inches by 1 foot 6 inches. This was evidently all that remained of an arched roof, and was the more interesting because it accounted for the niches in the side of a tank which I shortly after discovered. This cistern, which, like all the others, had been hewn from the solid rock, was 24 feet long by 20 feet wide, and on each side, on a level with the surface, were 5 niches, 3 feet 6 inches long, 2 feet 6 inches across, and 15 inches deep. It is probable that it had been originally arched over, and that these were the sockets from which the

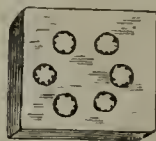


PLAN OF ROCK-HEWN CISTERNS AT ALEIYA-EDDIN.

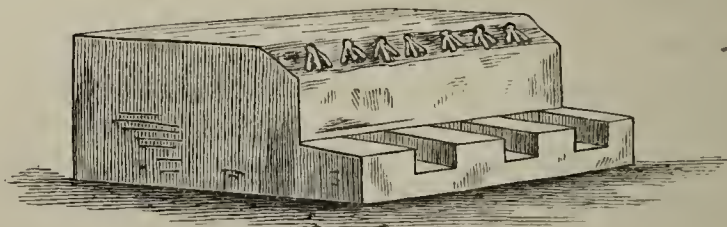
arches sprung. This cistern, as well as the largest, had a flight of steps which led to the bottom, now filled with *débris* and overgrown with shrubbery, so that the actual depth can only be conjectured; of all the reservoirs in the system of which this formed one, and of which a sketch plan is given below, the largest was 40 feet square, roughly estimated, and its present depth is about 15 feet. The bottoms of all were thickly overgrown. The ledges by which they were separated were of solid rock. Three others of a similar character were scattered elsewhere over the rocky hill-side. I also found one tomb, 14 feet square, containing two kokim, and the entrances to several others which were too much choked to be accessible.

Esfia itself was evidently a Crusading post, for there are many stones built with the native houses on which are Crusading devices, and on one of them the machicolated stones of an old tower have been re-arranged with narrow arched windows divided by a small stone column. The village is situated on a summit about 200 feet above the copious spring, and the hills round it form an amphitheatre. This is the head of the Wâdy Shomariyeh. On the summit of one of these hills, about half-a-mile from the village, are the ruined walls of the Khurbet esh Shelkiyeh, marked on the map, where I found a couple of cisterns, but no remains of any interest, and on another summit, half-a-mile distant, on the range forming the northern side of the amphitheatre, are the more extensive and apparently more ancient ruins of Khurbet Shemaliyeh, *الشمالية*, where there were also some cisterns, a very ancient olive-press, some drafted stones, with sockets &c., and a tomb, the entrance to which was choked. There were, therefore, in old times, three small towns on the hills surrounding the spring, and all equi-distant from it. The hill-sides all round bear marks of terraces, and the whole of the amphitheatre must have been richly cultivated and a scene of great beauty, as, indeed, it is at present, for though the terraces are for the most part dilapidated, the valley round the spring is irrigated, and green with gardens and orchards of fruit trees. Among the spots of interest near Esfia is a singular cleft in the rocks, about a mile distant from it in a westerly direction, called the Crow's Nest, *عقب ع*. The sides of the limestone precipice are about 150 feet high, split by cavernous fissures, and the gloomy area below is covered by a dense undergrowth of jungle, into which the sun never penetrates. Another curious spot is "The Forty Trees" (Shejeret Arbam), a grove of magnificent old oak-trees near the Khurbet el Khureibeh (K h). There is a rude sort of altar cut in the rocks here, and the place has a certain character of sanctity connected with it, as tradition has it that forty Skeikhs were once murdered here, and that death would be the penalty of any attempt to tamper with these trees, as it is already said to have been in the cases of a man and his father, who began to cut one down. At Khurbet Khureibeh I found nothing of any interest beyond a small arched chamber, which may have been comparatively modern, though constructed with the old stones.

Khurbet Lubieh اللوبية.—This ruin is situated about a mile and a quarter to the east of El Mughrushah (marked on the map K i), on a lofty spur projecting into the Wâdy el 'Ain. It is a small ruin, and so overgrown as to be difficult of examination ; but the stones are large, and the place bears all the marks of great antiquity, and seems not to have been occupied in recent times. It would seem to have been a fortress, both on account of its position and from the fact that the outside walls, still standing in places to a height of 3 or 4 feet, are about 6 feet thick. It is approached on one side by terraces, somewhat similar to those at Rushmia. I observed here that some of the stones were drafted ; many had holes and sockets cut into them ; there was a fragment of a sarcophagus and a circular stone a foot high and 18 inches in diameter, with a hole in the centre 3 inches square by 4 inches deep, and another stone 3 feet 6 inches high, which had apparently been pointed standing alone in the centre of what seemed to have been a chamber ; and there were some choked-up tombs and cisterns, but I only found two stones on which was any carving. Upon one was the following device 6 inches square.



On another stone, 3 feet long, was a carved moulding which may have formed part of a cornice, such as those existing at Kades and elsewhere.



The high rocky summit near Lubeh is called the Jebel Sheikh, from the fact that the natives consider it the highest part of Carmel. On the right hand of the path leading from it to Shellaleh I observed the fragment of a column about 6 feet long.

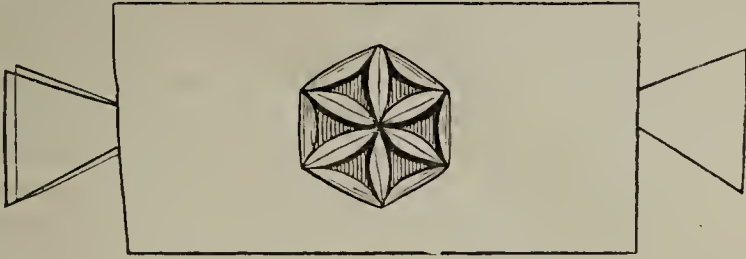
Khurbet Shellaleh has been exhaustively described in the "Memoirs," also Sheet 5, J h. Its position on the abrupt cliff of a wild gorge is in the highest degree romantic.

Khurbet er Kakhtyeh (Sheet 5, J h).—This ruin bears all the marks of having been undisturbed from the most ancient times. There is a large circular cistern here, 82 paces in circumference, the upper coping of stones still remaining in parts. It was apparently an open cistern, and is the only one of the kind I have seen on the mountain. It was about 20 feet deep to the undergrowth on the *débris* at the bottom. I also observed three fragments of columns, one of a roller, with grooves, and a large olive mill, hewn out of the living rock, with vat for receiving the oil attached, besides the circular bases of two other mills, each 7 feet in diameter. In the rock cliff near this olive mill was a most interesting tomb, with an inscription much defaced, but of which the traces of the Greek characters

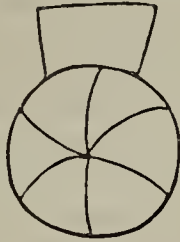
still remained on the rock over the doorway and under the arch ; below it was a hexagonal device in a tablet 2 feet long by 1 foot broad, and on each side of the entrance were two circular devices. The traces of the red pigment which had been used in the inscription were still visible. I had, unfortunately, no materials with me for taking a squeeze, and could only make a rough and very imperfect copy—

מלכ נ'ו ו' י' מ' נ'

Underneath which was the tablet—



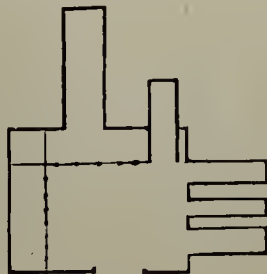
on the right side of
the entrance—



on the left



The construction of the tomb inside differed from any which I have hitherto seen. The chamber was 8 feet by 6 feet 6 inches. On the right-hand side were three kokim ; on the side opposite the entrance was one koka in the right corner ; the rest of the side was made up of a loculus under an arcosolium, but behind it, so that you had to step over the loculus to get into it, was an oblong recess with a flat roof 7 feet 6 inches long, by 2 feet 6 inches broad, the entrance to which was 3 feet high by 2 feet 6 inches broad, but the rock had been grooved so as to admit of a door, and on the upper right-hand corner was a socket into which the pivot for a stone slab had evidently been fitted. On the left side was a single loculus the whole length of the chamber under an arcosolium. The whole was in good preservation, and the tombs had evidently been the possession of a family of position. I annex a plan.



The Arab who accompanied me to Khurbet Rakhtyeh, who was a peasant I picked up at Shellaleh, told me that according to native tradition both this ruin and Shellaleh had in former times been inhabited by Greek priests. I observe that in the "Memoirs" it is stated that an early Byzantine monastery possibly stood at the latter place. The inscription over the tomb would in all likelihood date from the same period.

The olive mill I found here is the best specimen I have seen, though riding over the hills one day I came upon another almost as perfect in a secluded valley far away from any Khurbet. Indeed I have counted more than a dozen of these at the different Khurbets I have visited, and they evidence the extent to which olive culture was formerly carried on in Carmel. The method of grinding olives at the present appears to be identical with that of the earliest period, indeed in many cases the old stones are still used, though it is possible, as has been suggested in the "Memoirs," that the huge stone rollers were used for expressing the oil afterwards in default of the modern upright wooden screw apparatus.

Khurbet el Kerek (Sheet 5, K i).—These ruins, which are beautifully situated on a southern spur of the range, are apparently very old. All I found here were two rollers, an olive-press 8 feet in diameter, with a raised rim 9 inches high—the first I have seen—and some large circular stones with the square hole in the centre, and the recess round two sides, such as those already described. There were also some drafted stones with sockets, but I found no carving. A great many stones had not long since been removed for building purposes elsewhere. There was also a rock-hewn cistern, 12 feet square, with niches similar to the one at Ali-ed-dîn. On the road to Dahlieh, not far from here, my Arab pointed out to me an almost circular natural fissure in the rock, evidently not a well or cistern, though there was some masonry round the mouth, which by throwing lighted paper down I judged to be about 60 feet in depth, from which, according to native tradition, fire had at one time issued accompanied by loud reports like thunder-claps.

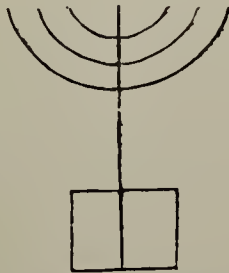
Khurbet Duweibeh (K i).—The ruins of the walls here were those of the last Druse inhabitants who had used the ancient stones. I observed a millstone built into the wall. Some of the old door jambs, with sockets, were still *in situ*. A large oblong vat like a sarcophagus, hewn out of the living rock, which I take to have been a wine-press, from the arrangements made for the juice to escape, and three rollers lying together, complete the objects of interest. Near the road from here to Esfia is another wine-press, 9 feet square and 8 feet deep, hewn out of the living rock.

Tempted by the account of a stone-mason of extensive caverns existing at a place called Naghnaghiyeh, النغنفية, I found, on my arrival, that it was none other than the hill marked Tell el Aghbariyeh (Sheet 8, J l). It consists of two limestone hills, which are honeycombed with natural caverns. They were only interesting as having at some former period served as dwelling-places. One, 18 feet square and 7 feet high, was plastered with cement, as was also a solid column in the middle, 3 feet 6 inches square. There was a sort of cornice running round the floor, and

an aperture at the back leading through to the hill above, apparently for the escape of smoke. There were several other caves bearing traces of cement and occupancy.

Khurbet Medineh.—This ruin is on the slope of the smaller of the above hills. Here were a pair of stones 3 feet high and 2 feet thick, each with a hole 5 inches square perforating the whole thickness, with a groove on each 4 inches broad and 3 inches deep, running the whole length of the stone. Also one in which was a hole 6 inches square and 6 inches deep, and on the other side of the stone was a groove 1 foot 6 inches long, 4 inches wide, and 8 inches deep, the uses of which I am unable to conjecture. There were also cisterns and tombs with choked entrances. Near the hill crowned by the Khurbet Beit Ras, is another hill, on the top of which is also a ruin, called the Khurbet Abu Lehiéh, at the head of the wâdy of that name, but I had not time to visit either of them. There were also some singular caves above the 'Ain Abu Zereik, marked on the map (Sheet 8, Lj), which I propose at some future time to examine. About half an acre of ground is here covered with holes like the bell-shaped mouths of cisterns, but they are only a few yards apart, and are between thirty and forty in number. They appear designed to let light into an immense cavern beneath, but I had no time to explore it.

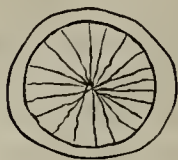
Khurbet Semmaka and *Umm esh Shukf* (Sheet 5, J i) have both been so fully described in the "Memoirs" that only a few words are necessary. In regard to the former, it is most fortunate that it has been the subject of a minute examination by the Survey ten years ago, for the door of the synagogue, which made it the most interesting ruin on Carmel, has now been removed, together with most of its stones, by the inhabitants of Umm es Zeinat. There is only a fragment of the door jamb, about 3 feet high, remaining. The walls, columns, and most of the foundations are all gone. On the steep slope of the Wâdy Nahel to the west, I found two specimens of tombs in a very perfect state of preservation. On each side of the entrance to one was this simple device, representing a seven-branched



candlestick. A recess, covered by a single arch, contained three loculi, two parallel ones, and one across the end. On the right side, under an arcosolium, were two more loculi. The other was larger and handsomer, and the angles of the roof and the edges of the loculi were almost as sharp as if it had just been finished. It contained two recesses, each with three loculi with high sides, under arcosolia, and on the third side a seventh

loculus with arcosolium. The Wâdy Nahel is the finest and most romantic gorge in Carmel, and the scenery here equals anything I have seen in Western Palestine.

Umm esh Shukf was formerly a Druse village, but the great quantities of pieces of tessellated pavement and glass fragments strewn about give evidence of occupation under conditions of Roman civilisation. Besides the tombs described in the "Memoirs" was one higher up the valley, containing three loculi with arcosolia, and on the doorway under the arch this device—



Khurbet Beistan.—Formerly a Druse village, a little lower down the wâdy. There are no remains here of any interest.

Khurbet Mansurah.—(Sheet 8, K j).—This is a small ruin on the plateau about 500 feet below the Mukkraka. Nearly all the stones have been taken to build the Carmelite church on that site. The workmen engaged on the building told me that they found several with carving and devices, but that they had chipped them off in their stone-cutting operations, and they are now built into the walls.

Khurbet Umm Ahmed أم احمد.—This is somewhat an inaccessible ruin situated on an abrupt shoulder of a spur of the mountain between the Wâdy el Jennadiyeh and the Tell el War' (Sheet 5, K i), about 800 feet above the Kishon. It has evidently never been disturbed by dwellers since ancient times. There are a few large stones with socket-holes; two tombs with handsome entrances, but too much choked for examination; some cisterns, and natural caves. One of these I entered by an artificial archway 5 feet wide; from the circular cave to which it gave access, another archway opened over a deep slope of *débris*, which probably concealed steps into another natural cavern about 60 feet long, 20 feet wide, and 15 feet high. A circular hole similar to those used for cisterns was cut in the rock above, probably to let in light. I think these caves may possibly have been used for places of refuge. I observed on the soft bottom the recent tracks of a leopard. There is a difficult path skirting the side of the range, about midway between the top and the plain below, and which, running in a northerly direction, leads one in a mile and a half from this ruin under abutting cliffs to *Khurbet el Kalaat* الفلة, the ruin of the fortress. This is one of the most interesting spots in Carmel. The mountain here rises almost precipitously from the Kishon to a height of about 800 feet, when it forms a ledge on a projection from which is an abrupt castellated-looking mass of rock. On the side facing the plain the rock rises precipitously from the slope to a height of about 50 feet; a little below it is a large natural cave; on the opposite side

of that facing the mountain an artificial defence has been raised by placing huge natural boulders one above another in three tiers. No attempt has been made to shape these ; they have evidently been placed in the position they occupy by a very ancient race. Each stone must weigh from two to three tons, and they have been so arranged as to enclose half the circumference of what was a stronghold of the most remote antiquity. The area thus enclosed behind this barricade of rocks was 150 yards in circumference, and was a position of commanding strength. At the edge of the slope, and attached to the fort, was a rock-hewn cistern about 20 feet by 30 feet, but it would scarcely seem likely to have been the handiwork of those who had piled these huge natural stones on each other. I regret that in the fading light I had not time to make a sketch. In close contiguity were the massive stones that had formed the quarters probably of the garrison, for they were few in number ; but about 300 yards distant were the more extensive ruins of an ancient village. I observed no drafted stones among those strewn around, though in one place the walls still remained two or three stones high, and I saw one stone which had been carefully shaped and hollowed out, making a bowl 18 inches in diameter and 9 inches deep.

Khurbet Zahluk lies about half-way between this place and Leijet Zahluk (marked on the map). There are some tombs and cisterns here, but nothing of interest.

This completes the list of Khurbets which I have visited, but there are still a few others on the mountain which I shall endeavour at some future time to examine. In conclusion, I would wish to say a few words in regard to a subject which has been a good deal discussed—I mean the supposed site of the Altar of Elijah. There can be no question that it was *not* on the position popularly assigned to it, known as the Mukkraka, or “place of burning,” where the Carmelites are now erecting their church, for this spot is in full view of the Mediterranean from Tantura to Cesarea ; and it would have been quite unnecessary for Elijah to tell his servant to “go up and look towards the sea,” for there was no higher point to go up to, and he could see the sea himself. The late Dean Stanley has therefore put it down on the plateau on which the Khurbet Mansurah stands, and near which is the well of the same name ; but I think there is a more likely position than this to which my attention was called by a pile of stones which, curiously enough, has all the appearance of an altar to this day. A mile before reaching the “place of burning,” concealed almost in a thicket of underwood, about 50 yards from the path from Esfia on the left-hand side, stands a singular pile of flat stones, each averaging 18 inches square, and 8 or 9 inches thick, which, placed on one another without cement, make a rude table about 12 feet long and 4 feet high. The breadth varies, as they have been broken away ; but there is a large artificial slab about 6 feet square lying at the base. Though I do not for a moment mean to imply that this was the original altar, the unusual shape and position of this pile suggests that it may have been the result of some sacred tradition with the Biblical event, for the locality would exactly

fulfil all the conditions of the incident. From it the ground swells back and upwards in every direction, so that a vast host of people might have been assembled around, and witnessed whatever was transpiring here ; a ten minutes' walk would have taken Elijah's servant to the top of the hill on which stands the Khurbet Duweibeh, from which the sea is plainly visible. Water in any quantity, even at that time of drought, could have been supplied from the tanks at Khurbet Ali-eddin, also only ten minutes' distant, a plan of which I have already given ; and we are told that twelve barrels of water were used. Within a hundred yards of this pile the present path passes down the Wâdy el Jennadyeh, and at the bottom of it is Tell el Kussis ("The Hill of the Priests"), the traditional site of the massacre. Again, this must have been in the centre of the most populous part of the mountain. Indeed, it is difficult to realise now the extent of the population which must in those days have inhabited the south-eastern angle of Carmel. The best idea of it can be formed from the fact that within a radius of two miles and a half from this pile of stones there are, including Esfia, which is doubtless an ancient site, no fewer than twelve Khurbets or ruins of ancient towns and villages on the various hill-tops and mountain spurs which surround it. Here, then, are all the conditions required to satisfy the Biblical narrative, and to support the hypothesis that the events recorded—which certainly could not have taken place at the site generally assigned to them without involving contradiction—occurred rather on the plateau a mile distant, which is surrounded by so many of the villages of the mountain to which "all Israel" was summoned, rather than to the more limited space half-way down the mountain on the other side, where water was scarce, and the opportunity of witnessing the scene that was transpiring was less favourable.

LAWRENCE OLIPHANT.

RECENT BIBLICAL RESEARCH IN PALESTINE, SYRIA, AND ASIA MINOR.

(A paper read at the Reading Church Congress, October 3rd, 1883.)

By Colonel Sir C. W. WILSON.

THE most important features of recent Biblical research in Palestine are the discovery of the Siloam Inscription, and the survey of a portion of the country east of Jordan, by Captain Conder and Lieutenant Mantell, R.E., for the Palestine Exploration Fund. The Siloam Inscription, found accidentally in the rock-hewn channel which conducts the water of the Fountain of the Virgin to the Pool of Siloam, records the meeting of the workmen, and the completion of the channel. Its value for philology

and epigraphy is very great, for it not only gives us a form of the Phœnician alphabet of a very early date, and closely resembling that of the Moabite Stone, but brings before us the Hebrew language as it was spoken in the age of the Kings. Professor Sayce, who remarks on the Biblical character of the language and the occurrence of Old Testament idioms in the inscription, assigns it to some date between the eighth and ninth centuries B.C., and Professor Neubauer has suggested that the channel was cut in the reign of Ahaz.

The expedition of Captain Conder and Lieutenant Mantell was brought to a premature end by the refusal of the Porte to grant a firman, but not before 500 square miles of country had been surveyed, and plans, drawings, and photographs procured of the principal places of interest. The district examined included Jebel Neba, Mount Nebo, so that we have now detailed plans of the spot whence Moses took his final view of the Promised Land; the plains of Moab on which the Israelites encamped before crossing Jordan, and where, in all probability, the cities of the plain were situated; and the heights from which Balaam looked down on the people he was called upon to curse. It is extremely interesting to find the name Zophim, under the form Tal'at es Sufa, "ascent of Zuph," still lingering on the slopes of Mount Nebo; and no less so to find groups of rude stone monuments near the sites upon which Baalam, probably, erected his three altars. These cromlechs have been noticed by Irby and Mangles, De Saulcy, Duc de Luynes, Dr. Tristram, and other travellers, but until the recent survey no one was aware of the great number of them scattered over the country east of Jordan, or of the remarkable manner in which they are grouped round certain centres. The survey confirms the identification of Ashdoth Pisgah with the "Springs of Moses," and throws much light on many obscure Biblical sites in the vicinity of the Dead Sea; but for these points, and also for an accurate description of the view from the summit of Nebo, I must refer you to the interesting work recently published by Captain Conder, under the title of "Heth and Moab." The results of the survey are so valuable that its abrupt termination is a matter for unfeigned regret.

Before crossing the Jordan, Captain Conder made an excursion from Beirût in search of the great Hittite city of Kadesh, on the Orontes, and believes that he discovered it in Tell Neby Mendeh, on the south slope of which there are ruins still called Kades. Until the last few years the Hittites were only known to us as one of the tribes inhabiting Palestine at the time of the conquest, but recent discovery has shown them to have been a powerful kingdom, or, perhaps more rightly, a confederation of small states, able to hold their own against the great monarchies of Egypt and Assyria, and exercising a widespread religious influence, if not dominion, over the people of Asia Minor. In the time of Abraham the power of the Hittites appears to have extended to the southern limits of Palestine; it is from Ephron the Hittite that he buys the cave of Machpelah, and the bargain is confirmed "in the audience of the children of Heth;" so too it is to the same children of Heth that

he "bows himself down," an obsequiousness which indicates clearly that they were the ruling race. At the time of the conquest there is a marked change; during the interval the Hittite power in Palestine had been weakened by the campaigns of Thothmes III, Rameses I, Sethi I, and Rameses II; and the Hittites re-appear as a people inhabiting Syria and Northern Palestine, or the country from "Lebanon even unto the great river, the river Euphrates." This decline of Hittite power in the south was followed, apparently, by the rise of the Amorites, a kindred Hamitic race, and by the formation of numerous petty kingdoms, which were never able to form a coalition sufficiently strong to resist the onward march of the compact Israelite force under the leadership of Joshua. The Amorites seem to have spread themselves over a large portion of Palestine; the Kings of Jerusalem, Hebron, Jarmuth, Lachish, and Eglon were Amorite; Sihon and Og, after driving out the Ammonites and other peoples, established Amorite kingdoms east of Jordan, and even Kadesh on the Orontes is said to have been an Amorite city, under the jurisdiction of the Hittites, during the reign of Sethi I.

While the conquest of Palestine was being effected by Joshua, the Hittites appear only as the allies of Jabin, King of Hazor, and during the stormy period of the Judges which followed, they are mentioned only as one of the tribes with whom the Israelites intermarried, and as having afforded shelter to the traitor who betrayed Bethel into the hands of the children of Joseph. During the earlier portion of this period occurred the remarkable invasion of Syria by the European nations who, after subduing the Hittites, advanced on Egypt, and were defeated by Rameses III in Southern Palestine; and there are traces of another disturbance, from which the Hittites probably suffered as much as the Jews, in the conquests of Chushan Rishathaim of Mesopotamia, who held Palestine for eight years. After this the Hittites regained some of their lost power, and in the reign of Tiglath Pileser I, who died 1100 B.C., they were paramount in Northern Syria; that monarch defeated a powerful combination of Hittite tribes, amongst whom the Muski, Karkiya, and Urumiya, were the most important, and subdued the whole country as far as the Mediterranean, upon which he embarked in a ship of Aradus. From this blow the Hittites never fully recovered, and they were soon afterwards forced northwards by the expansion of the Hebrew and Syrian monarchies, which rose to importance during the period of Assyrian decline that followed the death of Tiglath Pileser's son Samsiovl. Carchemish henceforward takes the place of Kadesh, as the centre of Hittite influence, and Hamath appears as a small Hittite state—first in alliance with David, and afterwards as tributary to Solomon, who built store-cities there. On the death of Solomon, and the break up of his empire, Hamath recovered its independence, and the Hittites regained something of their former power; this did not, however, last long, for they and their allies were signally defeated by the Assyrian Kings Assurnazirpal (885–860 B.C.) and Shalmanezar II (859–824 B.C.). From the latter date the history of the Hittites, as gathered from the Assyrian records, is one of constant revolt

and cruel repression, until the final overthrow by Sargon, who took Carchemish 717 B.C., led the people away captive, and appointed Assyrian governors over the country. The most striking events of this period are the three years' siege of Arpad by Tiglath Pileser II, and the same monarch's campaign against the King of Hamath and his ally Azariah, or Uzziah, King of Judah.

Little is known of the Hittite power in Asia Minor; it was probably at its height in the fourteenth century B.C., but must have been profoundly shaken by the great victory of Rameses II at Kadesh, which, according to the striking epic of the contemporary court poet Pentaur, broke "the back of the Khita for ever and ever." The tendency of such a defeat must at any rate have been to weaken the influence of the Hittites over the Mysians, Lycians, Dardanians, and other tribes of Western Anatolia, who fought with them on that occasion. It would appear, from the Assyrian records, that the Hittites gradually split up into a number of independent tribes or states, such as the Cilicians, Moschians, Tibarenians, Comanians, the people of Commagene, and others, who are mentioned in the annals of the wars of Sargon and his successors; the final extinction of their power, however, appears to have been due to the inroads of the Cimmerians and Scythians, and they afterwards formed part of the Median empire, which extended to the Halys. So complete was their overthrow that even their distinctive name was lost, and they appear in Herodotus and Strabo as Leuco-Syrians, Cappadocians, Cataonians, &c. The widespread influence of the Hittites may, however, be gathered from their monuments: the inscriptions on the monument at Karabel, the Sesostris of Herodotus, on the old road from Sardis to Ephesus, and near the Niobe, in the Valley of the Hermus, show that they penetrated to the Ægean, and there are certain indications that Sardis was once in their hands. The next monuments are those at Giaour Kalessi, between Sivrihissar and Angora, and then follow the interesting remains at Boghazkeui, near Yuzgat. The ruins at Boghazkeui, of which Herr Humann, so well known from his excavations at Pergamos, made a plan last year, are quite unlike those of an ancient Greek city; they cover a wide extent of ground, and have more in common with cities like Babylon and Nineveh than with the typical Greek city gathered round its acropolis. The walls are still standing to a considerable height, and there are underground means of exit which offer several interesting features; there are also the foundations of a large temple, constructed of massive stones jointed together in a peculiar manner, and a long inscription in which, though almost obliterated, several Hittite symbols are distinctly visible. The rock sculptures, of which casts were taken by Herr Humann, are a series of religious representations with Hittite symbols above the gods and goddesses; the majority of the figures are female, and amongst them are twelve of the armed Amazons who played such an important part in the religious worship of Asia Minor. In one figure can be recognised the "effeminate character, the soft outlines, the long sweeping dress, the ornaments of the eunuch high priest of

Cybele ;” and in another the warlike goddess Cybele. Not far from Boghazkeui are the ruins of Uyuk, with the curious sphinxes, which, though made after an Egyptian model, differ widely from the Egyptian type. Uyuk is interesting as the only instance of what may be called a Hittite mound building in Anatolia, and shows us that, contrary to the practice in Assyria, the Hittites placed their sculptures so as to face outwards. To this peculiarity of construction is probably due the almost universal selection of trachyte or basalt for the sculptures instead of a softer stone ; the only exception is, I believe, at Jerablûs, where some of the slabs are of limestone. In Pontus there are traces of Hittite art in two small slabs, which I found at Kaisariyeh, but which came originally from the neighbourhood of Amasia. At Iflatûn Bûnar, near the Lake of Beischehr, there is a large monument of Hittite origin ; and at Ivriz, near Eregli, there is a well-preserved rock-hewn monument, representing a thanksgiving to the god who gives fertility to the earth. “The god is a husbandman, marked as giver of corn and wine by his attributes ; and the gorgeous raiment of the suppliant priest, praying for a blessing upon the country and people, is purposely contrasted with the plain garments of the god.” The god wears the very dress still used by the peasantry of Anatolia ; the high-peaked cap is still in use among some of the Kurdish tribes ; the tunic fastened round the waist by a girdle is the present loose garment with its *kummerbund* ; and the tip-tilted shoes are the ordinary sandals of the country, with exactly the same bandages and mode of fastening. The sandal is very like the Canadian mocassin, and the long bandage wound round the foot and ankle is the equivalent of the blanket sock ; it is the best possible covering for the foot in a country where the cold in winter is intense, and the snow lies on the ground for a long period ; and as it appears on all Hittite monuments, I think, it is an evidence of the northern origin of the Hittites. It is interesting also to notice that some of the patterns on the priest’s dress have not yet gone out of fashion amongst the Cappadocian peasantry. At Bor, between Eregli and Nigdeh, Mr. Ramsay, whilst travelling with me last year, discovered a new inscription which, unlike all Hittite texts hitherto known, is incised, and not in relief ; near the silver mines in the Bulghar Dagħ is another inscription, and at the mouth of a curious gorge close to Gurun, near the head waters of an arm of the Euphrates, I found two others. It is, however, south of the Taurus, between that range and Aleppo, and eastward to the Euphrates, that the most numerous traces of the Hittites are to be found ; near the eastern extremity of the Baġtch  Pass, by which Darius crossed Mount Amanus, when he came down in rear of Alexander’s army before the battle of Issus, I visited a large mound on which a long row of Hittite sculptures, representing a hunting scene with great spirit, was standing *in situ* ; here, as at Uyuk, facing outwards ; a few miles beyond, on the road to Aintab, I saw other sculptures taken from one of the mounds. The district between the Giaour Dagħ (Amanus) and the Kurt Dagħ contains a large number of mounds ; in a small area I counted eight, which I feel sure would well repay exca-

vation. The slabs are all small, and could be easily conveyed to the coast, but, unfortunately, the British Museum has not seen its way to excavate; and the question is now, I believe, being taken up by the Germans. At Marasch, near the foot of the Taurus, several Hittite slabs have been found, and between Aintab and Aleppo, and towards the Euphrates, there are many large mounds, evidently of Hittite origin, including Tell Erfad, Arpad, and Azaz, the Khazaz of the Assyrian monuments. Several slabs have reached this country from Jerablûs, but the excavations at that place, owing to want of skill and inexperience, have not been so fruitful in their results as might have been expected. Jerablûs is generally identified with Carchemish, but unless a distinct statement is found in the Assyrian inscriptions that that city was on the Euphrates, I would place it at Membij, the ancient Hierapolis, a site which impressed me more than any other I visited west of the Euphrates. Hittite inscriptions have also been found at Aleppo and Hamath, and I think the slab obtained for the Palestine Exploration Fund from Tell Salhiych, near Damascus, is also Hittite.

A few words may now be said of the origin, religion, language, &c., of the Hittites. I fully agree with Professor Sayce in considering that the Hittites of Northern Syria and Palestine were intruders, and that they came from the Anatolian plateau east of the Halys, which was occupied by Hittite tribes from the Black Sea to the Mediterranean. This view of their northern origin is supported by their physical appearance, as depicted on the monuments, by the mocassin sandal already noticed, and by the fingerless glove, which is still commonly used by the peasantry, and is found in all cold countries. The sculptures show that the Hittites did not belong to a Semitic race. The features are rather those of a Northern people, and on the Temple of Abusimbel the Khita have a very Scythic character, with shaven head and a single lock from the crown. This peculiarity in the mode of dressing the hair is not seen on the Hittite monuments, but at Karnak and Thebes I noticed figures with the same type of feature as those on the monuments in Anatolia. It would be very interesting, and I hope it may be done some day, to obtain casts of the various types of face represented in the war pictures of Rameses II; they are very varied, and a careful comparison could not fail to be of value. Amongst some pottery dug up at Tarsus about thirty-five years ago, is a head, which seems to have been a likeness of a Hittite, as it gives the full lips, and the large thick nose, with a sharp curve at the end, which is found on the monuments. The type, which is not a beautiful one, is still found in some parts of Cappadocia, especially amongst the people living in the extraordinary subterranean towns which I discovered last year beneath the great plain north-west of Nigdeh. The religious belief of the Hittites, and its influence on the people of Western Anatolia, and through them on the Greeks, has been described, as far as it is known, in papers by Professor Sayce and Mr. Ramsay. I would only suggest now, as a subject for examination, how far the peculiar religious rites and observances at the two Comanas were of Hittite origin; at each place the priest was at least co-ordinate with the king in rank and religious power,

as appears to have been the case with the Hittites ; and at Amasia the most magnificent tomb is that of a high priest. I do not know whether there was any peculiarity in the faith professed by the early Christians of Cappadocia, but it may be more than a mere coincidence that the country between Boghazkeui and Comana Pontica is inhabited by an indigenous people who, nominally Moslems, profess a religion which, as far as I could learn, approaches more nearly that of the Ansariych than any other. That the Hittites had made considerable progress in art is attested by their monuments, and we may infer from the fact that, before the Cimmerian invasion, Sinope was one of the principal outlets for the produce of the East, that they were a commercial people ; the trade route seems to have passed through the Cicilian gates to Kaisariych, and thence by Boghazkeui to Sinope. It would appear from the proper names on the Assyrian and Egyptian monuments, that the Hittites did not speak a Semitic language ; the language was probably that of the Leuco-Syrians and Cataonians, and allied to the "speech of Lycaonia" which was in use in the time of St. Paul ; and it possibly lingered on until the complete Hellenisation of the people under the Byzantine Empire. Little progress has yet been made in decyphering the inscriptions, but there is every reason to hope that success will attend the efforts of Professor Sayce and other workers in that direction, and we shall then have a flood of light thrown upon a people with whom the Israelites at one time intermarried, whose religion some of them adopted, and with whose history that of the Jewish monarchy was, on several occasions, intimately connected.

In conclusion, I would draw your attention to an expedition which the Palestine Exploration Fund is sending to the East this month. The expedition will be under the guidance of the distinguished geologist, Professor Hull, Director of the Geological Survey of Ireland ; Captain Kitchener, who has done good work in Palestine, will be associated with him, and pay special attention to topographical questions ; Professor Hull will be accompanied by three gentlemen, who will devote their attention to special branches of science. The object of the expedition is, in the first place, to obtain a conclusive report on the geology of the Dead Sea basin, which has such an important bearing on the site of the Cities of the Plain ; in the second, to determine the route followed by the Israelites after they left Sinai, and the pass by which they ascended to the desert of the Tih ; in the third, to try and recover the sites of Elath and Eziongeber ; in the fourth, to search for Kadesh-barnea, and determine the southern boundary of the Promised Land, and the boundary of Edom ; and lastly, to examine the geology of Palestine itself. If but one or two of these objects can be thoroughly accomplished, a great addition will be made to our knowledge of the topography of the Bible. The Palestine Exploration Fund, and its system of working, is now well known, and I would only here express a hope that liberal subscriptions may be forthcoming to support an expedition which I confidently recommend to the notice of every student of the Bible.

THE NAMELESS CITY, AND SAUL'S JOURNEY TO AND FROM IT.

I AM thankful to Mr. Birch for his kind notice of my difficulties in regard to his paper on this subject.

I should, however, still like to add some remarks on a few of the points touched on in his reply.

As to that numbered (2) by Mr. Birch, I quite see that the words of 1 Samuel ix, 4 and 16, do not absolutely *prove* that the city was *not* in Benjamin; though, if that is not their meaning, they equally lack sufficient force to justify Mr. Birch in thinking that it was "certainly in the land of Zuph."

I argued, from the natural use of the words "passed through," "came to," and "out of," that the place thus spoken of was most probably *not* in Benjamin. For example, to tell a person in Plymouth, just over the border (the river Tamar) between Cornwall and Devon, that some one was coming to him "out of Cornwall" would be the most natural way of expressing the fact, if the person spoken of had just "passed through Cornwall."

But to tell a person at Saltash (just within the county of Cornwall) that one would be sent to him "out of Cornwall," would not be understood except it were supposed to mean that the individual was a *native* of Cornwall, as in this case Saul was of Benjamin.

If this, however, was all that was meant, the ordinary mode of expressing it we should expect to be "a Benjamite," or "a man of Benjamin."

But connecting the two statements that Saul and his servant had "*passed through* the land of the Benjamites," and that Samuel was to have a man *sent him* "out of the land of Benjamin," I venture to think that the presumption is very strong that Samuel's city was *not* in the "land of Benjamin," or of "the Benjamites."

The question here arises, however, does the "land of Benjamin" of the 16th verse mean the same as the "land of the Benjamites" of the 4th verse? The Bible Dictionary doubts whether the "land of Yemini" does mean the territory of the tribe of Benjamin. Perhaps that doubt may ere this have been cleared up.

I quite allow the force of the argument respecting David and the Cave of Adullam, if it can be proved that either the cave or the "hold" connected with it, and mentioned in 1 Samuel xxii, 1 to 5 (as well as in the passage given by Mr. Birch, and the parallel one in 1 Chron. xi, 1 and 16), was necessarily in Judah; but I would point out that in the Bible, so far as I can find, it is nowhere said that this was the case. And if the "hold" was in Judah, as allotted by Joshua (chap. xv, 35), will not the appearance in that chapter of the names of Gaza, Ashdod, and Ekron, which certainly were not in Saul's time in the *possession* of Judah, coupled

with the words of Josephus (VI, xii, §4), that he was commanded to leave the *desert* and go into the *portion* of the tribe of Judah, make it very probable that the object of his departure was for him to go into the district inhabited by his own countrymen?

As to the narrative going back, I am sorry to say I fail to see the exact force of the statement in the passages referred to, especially as to 1 Samuel xx, 22, but would remark that the incident recorded in 1 Samuel ix, 5, is shown by its wording to have been the last occurrence prior to their seeking Samuel, and the whole of the subsequent narrative shows that they did not renew or continue their search for the asses.

(3), (6), and (8). Since I wrote, I find that Smith's Bible Dictionary advocates the claim of Zelah to be the home of Kish, and consequently the place whence Saul started, and to which he returned. As he was in his father's household when the asses were lost, and Gibeah is nowhere in Scripture connected with Kish, and only with Saul after he became king, this certainly seems preferable.

Unless, however, we accept the supposition that Zelah-ha-Eleph was part of Jerusalem, we are left in doubt regarding the situation of his actual starting-point, beyond the fact of its being within Benjamin, Zelah not having been otherwise identified.

And here I would ask whether this interpretation of Zelah, Eleph, and Jebusi, as being various parts of Jerusalem, does not satisfactorily reconcile the passages which speak of both Zelah and Jerusalem as connected with Saul's family, and explain why David took the head of Goliath to Jerusalem (1 Sam. xvii, 54), *i.e.*, because of its association with the king's family.

The route Saul was *commanded* to take in going home, ends with the Gibeah of God; for after that (verse 7) he is to "do as occasion serve," and in the *narrative* of his actual journey all details are omitted, both up to his arrival there, and also after it, if his uncle was living at that place.

No doubt the command to "go down to Gilgal" referred to a time after he had reached his father's home.

(9). I should very much like to know why Mr. Saunders draws Saul's route in the manner it appears on the O. T. Map, for I cannot understand it at all, and it seems to me that the particulars given in chapter ix, verses 4 and 5, will hardly allow of his having taken so extensive a journey. The time named, too, in verse 20, which I suppose *might*, according to Hebrew reckoning, mean only the day before yesterday (!), would indicate that their search was confined within a much more limited extent of country.

(11). My objection on this point was that as Elkanah lived at Ramah before the birth of Samuel, and Samuel passed his infancy there, it shows that Elkanah did *not* remove thither *after* the birth of Samuel.

As showing the identity of Samuel's birthplace and subsequent residence (after the taking of the Ark and the removal of the Tabernacle from Shiloh), I would remind Mr. Birch that although the Hebrew only uses

the form Ramathaim in the 1st chapter, the Septuagint names the city "Armathaim" throughout the narrative.

There being no direct statement on the points in Scripture, it is of course only by inference that it can be contended that Samuel's Ramah was *not* in Mount Ephraim, but *was* south of Jerusalem. Hence the great importance of 1 Samuel x, 2, and on this—

(12) I think Mr. Birch is somewhat unfair, both to Mr. Shapira and (especially) to the MS. quoted by him.

In the first place, it is not "Mr. Shapira's reading" on which I wished Mr. Birch's opinion, but that of the Arabic commentator.

It is true that Mr. Shapira, quoting, as he said, from memory, does not *exactly* reproduce the explanation of the passage as given in this MS.

In reply to my question, Dr. Hoerning, of the Department of Oriental MSS., very kindly informs me that the MS. in question "is in the British Museum. It was purchased in 1881, and is numbered Oriental 2387." What the author of the Commentary really says is simply this: "The prophet does not mean to imply that Rachel's sepulchre is at Zelzah. He only means that the two persons whom Saul is to meet at Zelzah are, at the time when he is speaking to Saul, *by* Rachel's sepulchre, and that Saul will find them at Zelzah, in the border of Benjamin, both having travelled at the same time as Saul to that place. According to this explanation the passage would have to be translated: 'Then thou shalt find two men, who are now by Rachel's sepulchre, in the border of Benjamin at Zelzah.'"

Practically, therefore, it is a tenable view of the passage, that Saul was not going to Rachel's sepulchre at all, but to Zelzah, where he should be met by two men coming from thence. There is nothing in this to require us to believe that there was a village at Rachel's sepulchre.

This verse is the main difficulty, and whether Zelzah is looked on as the name of a place, or signifies, as the Septuagint translates, that the two men were "leaping for joy," the *place* where Saul was to *meet them* was evidently in the border of Benjamin, another incidental proof that the city was not within that territory, for it is not likely that Saul's journey to his father's home (certainly *in* Benjamin) would lead him from within to the border.

(13). Though I cannot find any direct Scriptural statement which shows them to be different places, yet further study leads me to agree with Mr. Birch that the Ramah of Judges iv, 5 was not the same as Samuel's Town.

As to the expression used of the Benjamite Sheba, that he was a "man of Mount Ephraim," I would ask whether that expression proves any more than that he was a Benjamite who had gone to dwell in some part of Mount Ephraim, just as "Tola, a man of Issachar, dwelt at Shamir in Mount Ephraim," and further, whether the term in 1 Samuel i, 1, "of Mount Ephraim," is necessarily connected with Ramathaim-Zophim, showing that that place was *in* Mount Ephraim; or may it not apply simply to Elkanah? so that Mr. Birch's explanation, page 52, iii, 3, would be correct, rather than 5 or 6 (see page 53, line 10).

To conclude, then, I venture to suggest that the "Nameless City" was Ramah = Ramathaim-Zophim ; that it was a place outside the border of Benjamin ; that it was so situated that just after leaving Ramah, Zelzah in the border of Benjamin would be reached, and the two men be met who had come from Rachel's sepulchre. Going on from Zelzah, the Oak of Tabor would be the place where Saul would meet the three men going up to God at Bethel (? the place, or simply the "house of God"). Next to this he would reach the "Gibeah of God," with the outpost (or pillar) of the Philistines, and after passing the city (? Kirjath-Jearim) would, on meeting the company of prophets descending from the "high place" (? where the Ark was), himself be filled with the spirit of prophecy likewise.

After this he goes to his native place Zelah, and Samuel subsequently calls the assembly at Mizpah, where Saul's election by lot takes place, and he then makes "Gibeah of Saul" his home henceforth.

I hope Mr. Birch will excuse my persistence in thus holding to some of my former views, and trust the discussion may be the means eventually of leading to a settlement of some doubtful points.

H. B. S. W.

September 25th, 1883.

EGYPTOLOGY AND THE BIBLE.

(An Address by the Rev. Henry George Tomkins, late Vicar of Branscombe, at the Reading Church Congress.)

THE topic prescribed for me is "The bearing of Egyptology, in its most recent phase, on the Bible." I would first say this : that to show the bearing of Egyptology on the Bible is rather to prove, by innumerable small coincidences, that which Ebers has so well called the *Egypticity* of the Pentateuch, than to establish any particular historical point by external and monumental evidence. But that function of Egyptology is a very important one indeed. For instance, the life of Joseph is supported at every point in the strongest probability by the parallel between the Egyptian monuments and the record in the Bible. I will not, however, take up much of your time in arguments this evening. I would point out that in the main, roughly speaking, the Delta of the Nile is almost the Biblical Egypt. We have so little in the Bible beyond the Delta, that we may say that the Delta is almost the Egypt of the Bible. I will now take three points in the Delta. The first is that of the Biblical Zoan, the Sâh of the present day, where the immense ruin-heaps are waiting to be explored. Here, already, the results of comparatively superficial examination by Mariette are so very important, in having recovered the sculptures

of the "Shepherd Kings," that we may expect something still more important from a thorough search of the ruins. The "Field of Zoan" of the Bible is called by the same expression in Egyptian records. The Field of Zoan was the scene of the great wonders which God performed by the hand of Moses. I do not think that Zoan is, as Brugsch supposes, the Zar of the Egyptian monuments. But now we will come to that point—to the place called Zar or Zaru on the Egyptian monuments, and here we come upon a very curious Biblical coincidence. In the 13th chapter of the Book of Genesis, where is described Lot's choice of the Jordan plain, it says: "The plain was well watered everywhere, even as the garden of the Lord, like the land of Egypt as thou comest unto [when thou enterest] Zoar." But there is very strong reason for believing that these words should be read not "as thou comest into Zoar"—which is far away from the land of Egypt—but "when thou enterest Zar." [The Hebrew word *exactly* suits this.] And I want to say a word about that place Zar. It was a most important military point, for it was the place of starting for all the Egyptian expeditions into Syria during the great reigns of the Thothmes and Rameses Pharaohs. They started from "the fortress of Zar;" and there is still to be seen at Karnak that magnificent tableau which represents the triumphal return of Seti I from one of these expeditions. You can see the "Fortress of Zar," and the Pharaoh in his chariot, at the head of strings of captives who are being taken into bondage in the land of Goshen. The open portals of the fortress are to be seen, and the fortified points of the great military road from Syria; and this is very important, for it is surely connected with a discovery of the late lamented Rev. F. W. Holland, Vicar of Evesham. In a letter to me, in May, 1880, he said: "The road which I discovered to the south of that (viz., of Brugsch's route of the Exodus), running due east from Ismaïlia, will, I hope, have had a special interest for you, as the route of Abraham into Egypt. It is a very remarkable road, evidently much used in ancient times, and it is curious that it has remained unknown." Mr. Holland described his route in a paper read before the British Association, and reprinted in the *Quarterly Statement* of the Palestine Exploration Fund for April, 1879. I hope this most important ancient road will not remain unknown much longer, for it ought to be very carefully surveyed. It is the road by which the fathers came into Egypt; the road at the termination of which, a little within that "Fortress of Zar," Joseph went to meet his father, with all the pomp of Egyptian monarchical grandeur, with his chariots and his escort; the road by which the great armies of Egypt went out upon their wonderful expeditions, which Sir Charles Wilson has referred to, against the Hittites and their other enemies; and therefore I say it is a road well worthy of being thoroughly surveyed. And I cannot help thinking that, since we know approximately the situation of that fortress of Zar, which was the key to the great military inlet to Egypt, by which our own troops so lately led our expedition to Cairo,—I cannot help thinking that if we were to put one thing and another together, we should find ourselves on the eve of very important results. The inlet of this ancient road must

needs be closely connected with the great military position in the strong eastern fortified wall of the ancient Pharaohs, the key to Lower Egypt, the Fortress of Zar, hitherto confused by Bible readers with Zoar in the passage I have quoted. And that discovery of the true Zar of Genesis xiii, which was made by the learned Dr. Haigh, in 1876, is taken for granted by Dr. Dümichen, in his important history, now in course of publication. That Zar is a place which should be carefully looked for. Now we will go a little further, about twelve miles along the land of Goshen along the line of the sweet-water canal, along the exact line of our recent military operations, and to the spot where I think the first engagement took place. We find there, at Tell-el-Maskhuta, the ruin-heaps and the ancient fortified walls of a most important place—one of the twin store-cities which were built by the Israelites for their oppressor, Rameses II. The venerable Lepsius distinguished himself, among many other achievements, by the identification of this place, upon apparently unassailable grounds, with Rameses. It has been taken for granted, and the railway station there is called “Ramsis.” M. Naville, in the course of his excavations made there for the Committee of the Egypt Exploration Fund, has found very important monumental evidences. I can give you a short account of his results, but I have not time to argue. I am perfectly aware that Dr. Lepsius still adheres to his original idea that Tell-el-Maskhuta was Rameses, and I have read his recent article in his *Zeitschrift* with the greatest attention. Now, M. Naville has found a very great and strong wall of circumvallation of that ancient fortress. It is built of crude bricks, enclosing a restricted area of about twelve acres, but those twelve acres are occupied in a strictly military manner by the magazines of a “store-city.” These store-chambers are very interesting indeed. They had high walls, and were strongly built, and they had the peculiarity of being opened only at the top. There were no doorways, and no inlets at the sides, and that peculiarity entirely tallies with the well-known representations of Egyptian granaries and store-chambers given by Wilkinson and Rosellini. While this was a store-city, it was a sanctuary as well, according to the custom of the Egyptians. Like other towns, it had a twofold name, a religious and a civil name, as, for instance, our own Verulam is called St. Alban’s. The secular name of this place was Seku or Sekut, *i.e.*, Succoth of the Bible. Let me remark that Brugsch has vindicated the sibilant pronunciation of the first Egyptian consonant, the well-known lasso-shaped hieroglyph, in Lepsius’s *Zeitschrift*, 1875, p. 8. It is, then, a most interesting fact that the secular name of this place was Succoth. I take this as proved, for it is established by the mention of Seku or Sekut twenty-two times in the inscriptions found there. There are the priests of the well-known setting-sun-god, Tum, of Sekut. And the sanctuary is called, fifteen times over, Pi-tum—the abode of Tum. If any one should question this, I will gladly give the references by which I think it is clearly established. Thus, it was the first halting-place of the Israelites in their exodus. And that is the first nail yet driven hard and fast in their route. We have had many theories and

contests, and an agreeable diversity of opinion, but from henceforth I believe that the theory of Brugsch, that the Pharaoh's host was swamped by the setting in of the waters of the Mediterranean in the Serbonian marsh, must be given up, and the old theory that the escaping tribes went along the valley of the sweet-water canal must be regarded as firmly established.

And now we are passing out of the region of vain conjectures into the region of historical realities.

There is another point. Tell-el-Maskhuta is not only the Pithom and the Succoth of the Bible, but a very interesting place, of which we read in the Septuagint version. When Joseph went to meet Jacob, and Judah was sent to meet Joseph on behalf of his father, the meeting-place was Heroöpolis. The identity of the spot is pointed out by Roman inscriptions there, with the name ERO, ERO CASTRA. The derivation of the name given by M. Naville is very interesting, namely, the Egyptian word "Ar," a storehouse, of which the plural is "Aru," identical with the Greek HPOY found on the spot. Thus the name is found, and the road is found, by which Jacob came and Judah went on before him. I may say besides that there is a very curious confirmation of the Biblical account of the work of bondage. The walls are very well built. The bricks are of Nile mud, and embedded in mortar, which, reminds us that the Egyptians "made the children of Israel to serve with rigour, and made their lives bitter with hard bondage, in *mortar* and in *brick*" (Ex. i. 14). There are three kinds of brick used, the first made with straw properly provided; the next are made with *reed* (the "stubble" of our Bible, and the word used is pure Egyptian, *Kash*; *arundo*, *calamus*); and the third kind are made of sheer Nile mud, when even the reeds were exhausted. All these M. Naville has found at Pithom.

I will only add a few words more in following the illustrious Engineer officer, Sir Charles Wilson, whom I am happy to see here in the interest of the Palestine Exploration Fund, and that is that I am a humble member of the committee of the Egypt Exploration Fund, not by way of rivalry, for I have been a local secretary of the Palestine Exploration Fund, for many years. The one is the complement of the other. Sir Charles Wilson is himself on the committee of the Egypt Fund. I will therefore only make the shortest possible appeal, and ask, Is it not worth while to pay for pickaxes, to get at the wisdom of the Egyptians?

THE FORTRESS OF CANAAN.

IN the last *Quarterly Statement* (Oct., 1883, p. 175) my friend Captain Conder, R.E., has made a very important and interesting identification (as it seems to me), viz., that of Khûrbet Kan'ân, near Hebron, with the fortified post of Kanāna, taken by Seti I in his first year from the Shasu.

It is curious, indeed, that the renowned name of Canaan should be found alive only at this one spot. There is no difficulty in its site on the hills, for there were Canaanites dwelling in the hill country of that very region (Num. xiv, 45), even at Hebron itself (Judges i, 10), and one great Canaanite king had his headquarters at Arad (Tell-Arad), in the hills about sixteen miles south of Khûrbet Kan'an.

I do not think Seti's march lay through the "vicinity of Gaza," but by the other road through Beersheba. For we now know the starting-point, as well as the object of attack. Whether the Rebatha of Seti was Rehoboth, רֶהוֹבוֹת, may be doubted, for the name Rebatha lacks the radical ה, and more resembles a *Rabbath*. Can it be represented by Khûrbet Râbûd (Sheet XXI, Name Lists, p. 401; "Memoirs," Vol. III, 360), where there are ruins, walls, and caves? Perhaps the pool or tank could hardly have been near; but it is on the right road.

And now I may say something of the great military route followed by the Pharaohs of the eighteenth and nineteenth dynasties into Syria.

We must shake off the teaching of Brugsch as to his supposed identity of the great key-fortress of Tsar, or Tsaru, with Tsân (Zoan, Sân), and revert to his own former and right view. I gladly quote from the learned Dr. Haigh, whose labours have been too much overlooked (*Zeitschr.*, f. äg. Spr. 1876, 54):—"Here, therefore, he (Seti) enters Egypt at the close of his campaign, as hence he had set out at its commencement. It was, in fact, Egypt's eastern gate; hence Thothmes III departed on his first expedition to Asia; here . . . the Mahar began his foreign travels; and the same place was . . . the gate of entrance for the Shasu on their way to the pools of Pi-tum. Its frontier character is still farther indicated by the text I have cited from Genesis xiii, 10: 'The land of Egypt as thou enterest צֶעַר (Tsár); by its title 'the seal;' and by its having the determinative sometimes of Egyptian, sometimes of foreign, places. Then Dr. Brugsch has cited a text which says that the canal which flowed through it connected the Nile with the water Akeb, and shown that this canal must be that which Pliny says flowed from the Nile through Babylon and Heroöpolis, and had received the name of Trajan, and may still be traced from the site of Babylon to the ruins of Mugfar, where it entered the Birket Timsah. Indeed, the identification of this place with the later Heroöpolis, and the Mugfar of to-day, seems to me to have been irrefragably established by Dr. Brugsch. Later, however, he has abandoned this strong position, and identified Tsár with צֶעַן (San), which can never have been the eastern gate of Egypt, and which stands on one of the channels of the Nile, not on a canal connecting the Nile with a lake." Dr. Dümichen has dealt decisively with this matter in his "Geschichte" (in Oncken's Collection), pp. 257, &c., concluding "that the identification of it with Taus-Zoan, so strongly maintained by Brugsch, absolutely cannot be brought into accordance with the data found in the Egyptian texts as to its situation."

Now Heroöpolis has been found by M. Naville (not at Mugfar, indeed, but) about six miles further west than Mugfar, at Tell-el-Maskhuta. And

I think the ancient road found by the lamented Rev. F. W. Holland in 1879 (*Quarterly Statement*, 1879, p. 59), "running" (as he wrote to me) "due east from Ismaïlia," and by which he was convinced that Abraham and Joseph and Jacob entered Egypt, was evidently the route of Thothmes III, and Seti I, and Râmeses II, to the Negeb; and, perhaps, of Aahmes I long before, when he chased the routed Hyksôs to Sharuhén; and probably of Amenemha I against the Seti, and still earlier of Pepi Meri-râ against the Herusha, whose name again occurs among the foes of Seti I. For let us remember the great antiquity of Tsar, or Tsaru. The treatise in praise of learning ("Records of the Past," VIII, 145) "is attributed," says Dr. Birch, "to the period of the twelfth dynasty; but the name of Pepi, the same as that of a monarch of the sixth dynasty, may indicate that it is of the earlier period." This curious treatise is "made by a person of Tsaru . . . to his son Pepi."

Now Tsán is as old as Pepi of the sixth dynasty (and was "built seven years after Hebron") and I little doubt that Tsar is of about the same high antiquity, and probably the work of the same founders; and it seems very highly probable that this great key-fortress stood where the ancient eastward road entered the Wâdy Tumilât. Is it out of hope that it may still be found, and monuments recovered bearing the name of Tsar?

I will not enlarge on this at present, since my purpose is just now to urge a further examination of the ancient road itself, strewn with flint flakes, among which Mr. Holland found "several beautifully-made arrow-heads." The splendid tableaux of Seti I at Karnak give the names of more than half-a-dozen halting-places, with forts and wells, or pools, on his route to Kanâna, and it may be hoped that some of these may be ascertained. We want a supplemental survey from Beersheba to the Suez Canal.

Dr. Haigh came to the conclusion that the fortress of Kanâna lay in the Arâbah south of the Dead Sea, and Brugsch seems to follow him in this ("Hist. of Egypt," Eng. ed., II, 13).

But now that Kanâna is found, we have much more to go upon; and Professor Palmer's journey in 1869 (*Quarterly Statement*, 1870, with map), and Mr. Holland's in 1879, with supplemental and more recent travels, such as Mr. Pickering Clarke's, recorded in the last *Quarterly Statement*, may help to make out the route of Seti to the Hebron region. The fortified watering-stations on this eastward route in Seti's tableaux bear mostly Semitic proper names, but unluckily some are surnamed with Pharaonic titles, which would soon be lost. The names recorded in the travels of the Mohar, some of them parallel with those of Seti's inscriptions, have been studied by the late M. Chabas ("Voyage d'un Egyptien," 1866), by Dr. Haigh, and by Captain Conder (*Quarterly Statement*, 1876, p. 74) and doubtless more light will be thrown on them by future researches. The discovery of Seti's Kanâna should encourage such inquiry, as it distinctly limits the area of search when taken in connection with the ancient road, and the true position of Tsaru.

It is a remarkable thing that we find in the great Harris papyrus ("Re-

cords of the Past," VI, 34) to which Captain Conder refers, that Râmeses III, in whose time the Philistines established themselves strongly as his subjects in the south-west of Palestine, built a fortified temple at Kanāna, of which the god was "Amen of Râmeses liq-An" (Râmeses III), whither the people of the land, the Rutennu, brought their tribute. This was probably in the time of the Judges, and it agrees well with the insolence of the Philistines towards the Hebrews at that time. The intimacy of the Philistines with the Egyptians, whose enemies, auxiliaries, and allies they were in rapid succession, is curiously let out in 1 Samuel iv, 8; vi, 6, where the Philistines and their diviners make familiar reference to the obstinacy of the Pharaoh and his counsellors, and the destruction of the Egyptian forces on the desert frontier.

We should not overlook the interesting point that like so many other ancient names, Kanāna seems to have travelled down from Northern Syria, where it is found in Assyrian records, as Dr. Friedrich Delitzsch remarks, and whence it seems to have extended as the well-known Biblical name Canaan to the whole coast-lands of the Mediterranean down to the Egyptian frontier. Here, then, is Kanāna in the hill-country west of the upper Euphrates, and the identical name as far south as Hebron, with the sons of Heth in both. ("Wo lag das Paradies?" 104, 270.)

Whether the name still lives in the northern as in the southern soil it will be interesting to inquire, for the Hittite land of Northern Syria is as yet almost unexplored. It is fair to say, however, that Schrader does not agree with Delitzsch in the view he takes of this name ("Die Keilinschriften, &c.," 2nd ed., p. 90).

I must add that M. Naville's discoveries at Tell-el-Maskhuta have shown that it was for Râmeses II that the Israelites built Pi-tum and Râmeses, and have thus confirmed definitely the general opinion of Egyptologists that he was the Pharaoh of the great oppression, and his son, Mer-en-Ptah, the Pharaoh of the Exodus. Therefore the attack of Seti on the fortress of Kanāna must have preceded the Exodus by more than forty years.

In the same series of scenes Seti I conquers the Shasu from Tsar to Kanāna; the Kharu (Syrians); the Kheta (Hittites); and Amaru (Amorites); and takes the fortified town Kadesh in the land of Amar of the Amorites, and overruns the country to Naharina. Thus Seti effectually prepared the way for his son Râmeses, whom he took with him in his wars, and established fortified posts in the desert and in Syria, and especially wells and tanks fortified. Such a well-spring, so protected, might be fitly called "a fountain sealed," מַעְיֵן חָתוּם, (Cant. iv, 12), for *Khetam* is the very word in Egyptian for a fort, still found at Sarabit-el-Khadem, the Egyptian military mining station in Sinaïtic Arabia.

An account of Seti's triumphal reliefs at Karnak may be found in Professor Lushington's paper in "Trans. Soc. Bib. Arch.," Vol. VI, 509; and the tableaux are excellently reproduced from Rosellini's large plates in M. Lenormant's new edition of his "Histoire Ancienne de l'Orient," Vol. II. I am very glad to know that Professor Maspero is now engaged on a

separate History of Egypt, in which all the most recent results will be taken into account.

HENRY GEORGE TOMKINS.

*Weston-super-Mare,
November 16th, 1883.*

HIDING-PLACES IN CANAAN.

V. THE CAVE OF ADULLAM, OR OLAM, NOT NEAR ADULLAM, BUT AT KHUREITUN.

JOSEPHUS says this cave was near the city of Adullam, but William of Tyre identifies it with the well-known and often described cave of Khureitûn, four miles south-south-east of Bethlehem.

I propose to show that, for once, mediæval credulity proves victorious over antiquity, ability, and the numerical superiority of its opponents. The explanation is simple enough: the Crusaders' rough practical knowledge of David's outlaw wants was a far more reliable guide than the subtler acumen of literary critics.

The cave is named in two Biblical episodes.

(1) "David departed thence (*i.e.*, from Gath) and escaped to the cave (of) Adullam" (1 Sam. xxii, 1).

(2) "Three of the thirty captains went *down to the rock* to David, into the cave of Adullam; and the host of the Philistines encamped in the valley of Rephaim. And David was then in *the hold*, and the Philistines' garrison was then at Bethlehem" (1 Chron. xi, 15, 16). In 2 Samuel xxiii, 13, a copyist's error gives "in the harvest time" for "to the rock."

Hence we learn that there was near the cave some conspicuous rock or eminence, as well as some hold or fortress.

It seems to me that this same hold is referred to in the following passages:—1 Samuel xxii, 4, 5; 1 Chronicles xii, 8, 16; 2 Samuel v, 17; and just possibly 1 Samuel xxiv, 22.

PART I.

Ten points have been named in favour of the cave having been near the city of Adullam (in the Sheplehah), identified by M. Ganneau with the ruins of Aid el Mieh, near Wâdy es Sur.

(a) The Bible speaks of the "Cave of Adullam," and mentions only *one* city of that name. But "the oak of Tabor" had nothing to do with Mount Tabor, and so it does not follow that the cave of Adullam had necessarily to do with the city of Adullam.

Further, as in (1) and (2) the precise words are "to the cave *of* (not *at*)

Adullam," it is not certain that "Adullam" means a place at all; it may only be a descriptive title.

(b) Josephus distinctly states that the cave was near the city of Adullam. But he is too inaccurate and inconsistent a writer to be any authority in this case. In fact, the balance of his opinion is adverse to those who quote him on this point. In a later statement he identifies the hold near the cave of Adullam with the citadel of Jerusalem, and the *later* statement should surely outweigh the earlier one, if a writer may alter at least his own mistakes. The fact is, his first identification was easily made because the cave of Adullam looked like the cave *at* Adullam, and then it was easily rejected because he took the *hold* in 2 Samuel v, 17, to be the *stronghold* of Zion, as (almost) the same Hebrew word is used for the two, while "went *down*" is altered into "went *up*," to make all square. A writer who can interchange such words at his own sweet will, and turn his back upon himself in a few pages, is a guide on whom I for one cannot rely. But if Josephus is to be believed, why quote the earlier statement which he himself discredits?

(c) "David is spoken of whilst in the hold of Adullam, as not being in the territory of Judah (1 Sam. xxii, 5). This agrees with the position of Adullam in the Shephelah beyond the mountains to which Judah was confined when the Philistines were too powerful for the Jews" (*Quarterly Statement*, 1880, p. 174). But as the cities which even Samuel recovered were those "from Ekron (1 Sam. vii, 14) to Gath," and as Shochoh in xvii, 1, is reckoned to Judah, it seems incredible that after the fall of Goliath Adullam could be considered as not being in the territory of Judah (see Josephus, "Ant.," VI, xii, 3). While, however, I admit that the hold (1 Sam. xxii, 4, 5) was near the cave of Adullam, I do not allow that "Get thee into the land of Judah" requires the hold not to have been within the tribe of Judah. The Sp. Com. observes that "1 Samuel, xxiii, 3, implies that Keilah was not in Judah, at least not in the hill country which was probably what they meant by the term." Exactly so. Keilah and Adullam were both in the *lowland* district, while the forest of Hareth was in the *hill* district, and the cave of Khureitûn is in the *desert* district. Thus David could be said to go into Judah whether he started from Adullam or Khureitûn. Therefore 1 Samuel xxii, 5, suits either site.

(d) "David here (at Aid el Ma) encamped between the Philistines and the Jews, covered the line of advance on the cornfields of Keilah" ("Tent Work," p. 278). But much more he ought to have hindered their advance on Bethlehem, if [see (j)] the exploit of the three captains took place at that time. The time, however, of the Philistine foray doubtless depended on the state of the corn, and not on David's absence.

(e) "At Adullam the sides of the valley are lined with rows of caves, and on the hill is a separate cave" ("Tent Work"), which in *Quarterly Statement*, 1881, p. 44, is, with a touch of humour, described "as sufficiently large to have been the habitation of David while his band was garrisoning the hold or fortress." But that any of these caves would make a good hiding-place is not a suggestion that I should like to have made to David.

As for the explanation that his men garrisoned the hold or fortress, *i.e.*, the city of Adullam, it must be pointed out that a fortified town was the very *worst* place of refuge David could have. When Saul heard that David had come to Keilah, he said, "He is shut in by entering into a town that hath gates and bars." After escaping through a window at Gibeah, it is incredible that David or his men, or both, would seek safety *within* Adullam. Besides, Saul never heard of David while he was at the cave of Adullam. Were then all the Adullamites friends to David, and only the Keilites traitors? It is impossible that David could take refuge close to a well-known town, and be joined by 400 men, and Saul not hear a word about it.

(f) "There is no great cavern at the ruin in question (at Adullam). This is precisely why the site seems most probable. The dampness and the feverish character of the atmosphere . . . seem to prevent the large caves from being ever used as habitations" (1875, p. 148). But according to the Bible the cave seems to have been the abode alike of David and his men, amounting to 400. It speaks not of *caves*, but of one only, and that must have been a large one. If there is no large cave at Aid el Ma, then the site is herein unsuitable for the cave of Adullam. Further, it is a complete mistake to suppose, in general, that the large caves in Palestine are never used as habitations, and in particular that the cave of Khureitûn is either damp or feverish. (See below, 14, 16, 17, 19.)

(g) "It follows, from the expression 'Brake through the host or camp,' that the way from Adullam to Bethlehem lay through or across the valley of Rephaim" (Sp. Com. on 2 Sam. xxiii). Gesenius's Dictionary gives "brake *into*," which removes the difficulty at once. Any possible position, however, for Adullam is such that the captains on their way from it to Bethlehem would not have to pass through or across the valley named.

(h) "The hill at Adullam is the strongest site to be found in the neighbourhood of the rich corn lands of Judah" (1875, p. 149).

(i) I make the Adullamites a present of this jot. In the neighbourhood of the cave of Adullam was *the rock* [see (2)] or (Hebrew) *Tzur*, and the valley near Aid el Ma is called Wâdy es Sur, *i.e.*, the valley of the rock. The name Sur also occurs twice more in the same valley. Now I admit that these two—(h) and (i)—are remarkable coincidences, but there were other strong positions beside that of Adullam. Of Herodium it is said ("Tent Work," p. 152): "In the scenery south of Jerusalem, and in views of the country round Bethlehem, this mountain (Jebel Fureidis) forms a most remarkable feature." Thus both the rival sites seem to have a prominent hill close at hand. Possibly Wâdy es Sur got its name from Beth-zur, as one of its tributary valleys comes down from that place. If Adullam meant the well-known city of that name, it would seem superfluous to mention *the rock* along with "unto the cave of Adullam" in 2 Samuel xxiii, 13.

(j) "The journey from Ed el Miye to Bethlehem and back, about twelve leagues, would be nothing for the light-footed mountaineers who surrounded David. Those who consider the distance too much have only to remember

that it is related as an exploit, and that the fatigue has to be added to the risk (M. Ganneau, 1875, p. 177). This incident seems to me the crucial point on which the false claims of Adullam to be the site of David's cave are hopelessly shivered to pieces.

First let it be settled on what known occasions David was or may have been at the cave of Adullam.

I. He was there after leaving Gath (1 Sam. xxii, 1, 4, 5), and after his return from Moab, if (as I believe) *the hold* meant that near the cave of Adullam.

II. Just possibly after sparing Saul's life at En-gedi (xxiv, 22), if *the hold* means that near the above cave.

III. After he was anointed king over Israel (2 Sam. v, 17), for then on the invasion of *all* the Philistines, David went *down* to the hold, if (as I believe must be the case) this hold means that near the above cave.

To which of these are we to apply 2 Samuel xxiii, 13? If to I, then we have to believe that not long after the sore defeat at Ephes-Dammim the Philistines actually penetrated to the heart of Saul's kingdom, and that while their host was encamped in the valley of Rephaim, and their garrison was at Bethlehem, the three captains indeed showed heroic courage, but that neither Saul at Gibeath nor David at Adullam stirred a finger to interfere with them, although the latter was down at once upon the enemy when they robbed the threshing-floors at Keilah. Such inaction would be equally inconsistent with the activity of Saul and the patriotism of David.

It seems to me, therefore, utterly incredible that the exploit took place on occasion I.

If we refer it to II, then we have to believe the same impossibilities even when David's men had increased to 600. This also must be rejected.

Only III remains, and it may be observed that Josephus joins together 2 Samuel v, 17, and xxiii, 13, in "Ant.," VII, xii, 4. David must have been driven to the very last extremity when he withdrew from the impregnable fortress of Zion, and went down to *the hold*. But here again it is incredible that a genius of David's intelligence and military capacity, when all the Philistines came up against him, should have made a flank march to Adullam, close to the enemies' country (like an ostrich putting his head into a small cave), instead of retiring on the wilderness of Judah, the constant rallying place of the Jews when they were hard pressed by their enemies. Besides, if David at this time fell back on the city of Adullam, why should he further dwell there in a cave and not in a house? This incident seems to me to crush to atoms the popular notion that the cave of Adullam was near the city of Adullam. I now claim that destructive criticism has annihilated this error, and shown where the cave was not. It remains to show where it was.

PART II.

In disposing of the above ten points, I claim to have proved that the cave of Adullam was not near the city of Adullam. I will now give

twenty points proving that it was the present cave of Khureitûn, and invite the Adullamites to show how my argument fails.

1. *The cave was in the desert of Judah.*—The desert on the eastern side of the watershed was always a favourite refuge of the Jews in time of danger—*e.g.*, Rock Rimmon, Masada, 1 Maccab. ii, 31. Hunted out of Gibeah, pursued to Ramah, only extricating himself from Gath by a clever artifice, David must have been a madman indeed to seek safety close to any city. Nothing remained for him but to escape to the wilderness—the scene of his future wanderings.

2. *It was not far from Bethlehem.*—Hence he could communicate with his friends, get food and also notice of Saul's movements. Yet at the same time he would be in perfect concealment, and as a matter of fact Saul remained in complete ignorance of David's whereabouts during his stay at the cave. Treachery alone could have helped Saul, and on one occasion David seems to have suspected it in (1 Chron. xii, 17) the case of Amasai. The cave cannot have been far from Bethlehem, as David while in "the hold" must still have been watching the Philistines in the valley of Rephaim (2 Sam. v, 17).

3. David's parents would easily and naturally go *down* to the cave of Khureitûn.

4. Thence Moab was an obvious and accessible place of refuge.

5. This position of the cave suits the expression "into the hold to the wilderness" (1 Chron. xii, 8).

6. From this cave in the wilderness, David might rightly be said to go into the land of Judah (see (c) *supra*).

7. If Samuel's Ramah was (as I believe) near Bethlehem, then it would be easy for Gad, if he belonged to the school of the prophets at Naioth, to join David at this cave.

8. As Jebel Fureidis, or the Frank Mountain (Herodium), may be passed on the way to the cave from Bethlehem or Jerusalem, and as it is the most prominent eminence in this part of the desert from Judah, it exactly answers to *the rock* in 1 Chron. xi, 15. The relative position of the places suits Kennicott's rendering: "The three captains went down *over the rock* to David into the cave of Adullam."

9. The hold was apparently some strong position near or just above the cave. Bethlehem must be visible from some point close to the cave of Khureitûn, so that the exploit of the three heroes (Jashobeam, Eleazar, and Shammah, according to Kennicott) doubtless took place under the very eye of David.

10. *The cave of Khureitûn must have been known to David.*—As he formerly fed sheep in this wilderness, he must at some time have observed the open mouth of the cave across the yawning ravine, and youthful curiosity would lead him to explore its hidden depths. Probably, however (see 20), the cave had attained fame long before David was born.

11. *But it was not known to Saul*—who, though well acquainted with Benjamin's great cave (1879, p. 125), would have had much trouble in finding Judah's more famous hiding-place. Sheikh Abou Dok'n, in 1864,

after wandering with a companion perseveringly for five hours, had to give up his search in despair ("Land of Israel," p. 402).

12. The cave of Adullam was a *large* one, and "the cave at Khureitûn is the most remarkable cavern in the country" ("Tent Work," 152).

13. *No other large cave* (to my knowledge) *exists both in the wilderness and near Bethlehem*. If any such, however, is known, this is a point on which Captain Conder must have information. Curiously enough, a cave actually named "David's cave" is marked on the map three and a half miles east of Bethlehem, but it is not thought worthy of particular notice in the "Memoirs."

14. Large caves in Palestine have frequently been inhabited in times of danger, *e.g.*, Mugharet el Jai (1879, p. 119).

15. *This cave is habitable*.—Mr. Drake reported (*Quarterly Statement*, 1874, p. 25); "The main objection urged against this (*i.e.*, Khureitûn) being David's lair is its position, which is said to be too far eastward (for it to be near the city of Adullam); but in all other respects it is most admirably suited for an outlaw's hiding-place." Stronger testimony could not be desired.

16, 17. "This cave is *dry* and *airy*; the air of the cave was dry and pure" (Drake). "The air is dry and good" ("Memoirs"). There seems therefore, to have been some unnecessary alarm about David's taking fever or rheumatism. My visit to the cave of Khureitûn with H. B. was on April 3rd, 1875. Heavy rain had fallen the previous day, and during March the rainfall had reached $10\frac{1}{2}$ inches. Within the cave water was dropping in two places. In 1877 less than 1 inch was registered (1883, 22) in the same month, so that if David had a fine season he must have found the cave as dry as tinder.

18. *This cave is well provided with water*.—"Two other openings beside the door fully command the path to 'Ain el Natuf (the dripping spring or well), which consequently could not be used by an attacking party, while, owing to the overhanging rocks, a besieged party might draw their water with impunity" (Drake).

19. This cave has not only been actually inhabited at times, but must have been *much resorted to*, as proved (1) by history. A thousand refugees in B.C. 166 hid themselves (so Prideaux, Jahn, Milner, rightly I believe) in *one* cave in the wilderness near Jerusalem.

On being betrayed they refused to come out of their hiding-place, and as they offered no resistance on the Sabbath, either by casting stones or stopping the *openings* (N.B.—plural) of the cave, they were suffocated by smoke, at the command of Philip (rightly named) the Phrygian. Khureitûn may well have been the scene of this massacre.

St. Chariton probably started housekeeping in this cave when he was building his Laura, called Suka. Beyond question the Tekoites took refuge here in A.D. 1138 (Robinson's "Bib. Res.")

(2), By excavation. Colonel Warren, after digging, reports ("Letters," p. 84): "In the second chamber, after working through a loose, brown loam abounding in pottery, a stalagmite floor, 3 inches thick, was reached, at

4 feet 6 inches," and "in the first cave the stalagmite floor was reached at a depth of 7 feet, the white dust between it and the rock having a depth of 15 inches; *the 7 feet of loam was full of broken pottery.*" As the shards do not seem to have been *Moabite*, they may be taken to be conclusive evidence that the cave was once a popular resort.

20. But how did this great cave near Bethlehem come to be entitled the cave of Adullam? for, of course, there was no second city of that name close to it. It is also called at the present time Mugharet M'asa. My conjecture that this word was got from the Hebrew *Masa* (a refuge) was rejected by Captain Conder, whose own explanation, that it means "the *intricate* cave," was in turn set aside by Professor Palmer, who translated it "the cave of the rebellion." Can this have any reference to David's outlaw band?

No reasonable explanation seems to have been given of the meaning of "Adullam." Jerome's attempts are only fanciful. R. J. Simonis says it means "the cave of retirement," apparently referring to David's hiding there. Hebrew scholars on this point seem unable to give us any real help. Bearing in mind the extraordinary character of the cave, its great length (reported by the Arabs to reach to Tekoa and even to Hebron), its numerous chambers, and its endless windings, it seems to me that a cavern so remarkable would certainly acquire a special name marking its unique character. Can "Adullam" then be a corrupt reading for some other word? The only satisfactory conclusion I can come to is this. The meaningless title "Maarath Adullam" becomes a very striking one by the slight alteration of א (daleth) into ו (vau). I believe, then, that the original name of the cave was "Maarath Olam," or the Cave of Eternity, *i.e.*, "the Old Cave" (as in Prov. xxii, 28; xxiii, 10, *old landmark*). Just as the Kishon seems to have been called the ancient river, *i.e.*, most ancient in the memory of man, so it seems to me that the cave of Adullam is a corruption for "the old cave," whose fame had been handed down from generations past. But how came the alteration to be made in *three* passages in the Bible?

It seems to me that in 1 Samuel xxii, 1, *Adullam* was substituted for *Olam* either by a copyist's error or emendation because he knew that Adullam was not far from Gath, and therefore thought it probable that David went from one to the other. Afterwards the other passages were to agree with 1 Samuel xxii.

It will be observed that I have assumed (1) that David's visit to the cave of Adullam (2 Sam. xxiii, 13) must be one noticed elsewhere in his history, and (2) that no other larger or more suitable cave now exists (known or unknown), or ever did exist, near Bethlehem.

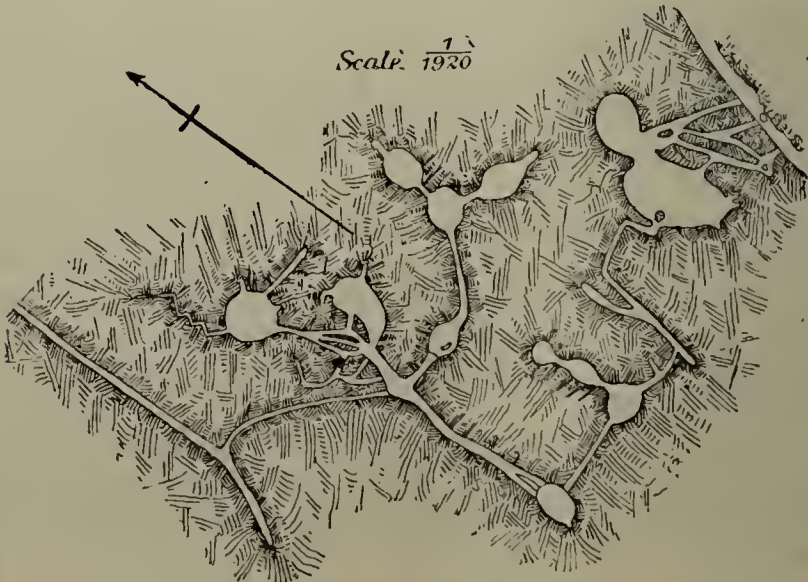
If any one think these assumptions are unsafe, let him, like Goliath, challenge them.

I claim now that after four years (1880, p. 173) I have made out a complete case, and proved that David did not escape to a cave at Adullam, but to the cave of Olam near Jebel Fureidis, *i.e.*, to the cave of Khureitûn, or M'asa.

Still, if Horam (*roi de Guézer*), or any champion of the Adullamites (a most powerful tribe, I admit), desires before parting with the cave which they have usurped for years, to see me face to face in these pages, be it so. I would, however, add one warning: Be content with smiting Moabite pottery, and spoiling Shapira's supple skins; for why shouldest thou meddle with David in his cave? Remember you have far less chance of success than had the son of Kish. You cannot with Saul, threaten, coax, or starve him out; neither can you with Herod hook him, nor with Philip roast him out. As a second Benaiah you must go boldly in and try to 'drag out Bethlehem's lion by sheer force of argument, at the imminent risk of being yourself thrown headlong into "the dripping well"; for so numerous are the cross passages (1-20) that, in the words of Mr. Drake, "any invader who had succeeded in penetrating the entrance passage would be entirely at the mercy of the defenders."

The cave is thus described by Captain Conder ("Memoirs," Vol. III, p. 375):—

"A ledge of rock, some 6 to 8 feet wide, leads above the Ain in Nâtûf to the entrance of the cave, in front of which are two large blocks of rock, some 7 feet high. The cave has three narrow entrances, with two cross passages, and these lead to a chamber 55 feet diameter and 30 to 40 feet high. The walls are smooth, and seem to have been possibly worn out by water action. It does not appear that any of the excavation is artificial. A very narrow passage leads in irregularly for about 100 feet to a second small chamber, about 10 feet diameter, whence a rude passage runs out for about 25 feet. There is again a passage at a level a few feet higher, leading westwards from the second chamber for 25 feet to a third round chamber, reached by a drop of about 14 feet. Out of the first chamber a passage leads north at a level of some 4 feet above the bottom, and runs about 100 feet north to a large chamber, some 18 feet diameter, from which very narrow passages run out and terminate in the plan. There is a fifth



chamber to the south-east of the fourth, and several ramifying passages. An important branch gallery runs away eastward from the main passage, terminating in three chambers about 10 to 15 feet diameter. Another passage, narrower and at a level higher than that of the main passage, runs north-west for 50 feet, and leads to a gallery running north and south 250 feet long. The greatest length of this curious cavern is 550 feet ; the passages are 6 to 10 feet high ; the air is dry and good, but the place is full of bats, and the floor entirely covered with thin dung."

See also Warren's account (*Quarterly Statement*, 1869, Letter XXXV, p. 83) :—

"We went in search of the passage described by Dr. Tobler, in which he found some sarcophagi and Phœnician inscriptions. Sergeant Birtles and six fellâhs were also of the party, to excavate and examine the bottoms of the large caves.

"We arrived at the cave at 10 A.M. ; the Ta'amireh at first objected to our digging, but were soon quieted.

"We went through to the last cave spoken of in Murray's Handbook, whence Tobler's description of the passage begins. On our way we found a passage to the left, half filled with the refuse of bats. After crawling for about 200 feet on our elbows and knees we came to a shaft leading upwards, about 15 feet high ; climbing up this we found ourselves in a passage, about 6 feet high, leading north and south : to the north we went perhaps 200 feet, when the passage ends in a cave, from which, after passing a small hole, are many other passages leading in all directions. To the south we went about 100 feet and found some broken stones which had been hewn. Over a little passage to the east we saw a Jerusalem Cross smoked on the wall. Finding the time was passing quickly we returned and followed into the last cave spoken of by Murray. Here in the north-west corner is a small opening, and over it written "No outlet here," and it was in this, as far as we could understand the description, that Tobler had found an outlet. Crawling up this passage we found to be most difficult, and only to be passed in one place by lying on the side and wriggling through. After this there is a small passage for about 30 feet, and then it opens into a passage running north and south, which proved to be the passage we had been in before when we had found the Jerusalem Cross. It will be thus easy at some future period to go up the first passage we explored, and thus miss the very difficult pass from the last cave ; but to explore the cavern properly (if it be worth the trouble) people should encamp near the cave for a day or two. Although we got in such a little way we were at work over five hours in the caves.

"There are four large caves ; in the fourth and last no excavation was made.

"In the third the rock was found at 2 feet 6 inches. No pottery.

"In the second, after working through a loose brown loam abounding in pottery, a stalagmite floor 3 inches thick was reached, at 4 feet 6 inches ; below it for 18 inches was a white dust and then hard rock (melekeh). No bones.

"In the first cave the stalagmite floor was reached at a depth of 7 feet, the white dust between it and the rock having a depth of 15 inches, the 7 feet of loam was full of broken pottery. No bones."

W. F. B.

NOTES ON PRÆ-EXILIC JERUSALEM.

WELCOME to Professor Sayce as a fresh gladiator in the arena of Zionie controversy! Equipped with the latest and best weapons from the East, and unimpeded by old prejudices from the West, he has over already battered antagonists every advantage save one. He can hardly know the ground so well as those who have learnt the slippery places by humiliating falls. Time only can show what success he will have with his strange theories, and whether a ferule can avail against Professor Robertson Smith's new net (*i.e.*, his theory that præ-exilic Jerusalem never occupied the south-western hill) and Mr. Sayce's trident, whose three sharp prongs are (1) that the Siloam Tunnel was made by Solomon, (2) that "the upper pool" was the Pool of Siloam, and (3) that a valley or depression formerly ran from the Tyropœon to the Kidron valley, entering the latter a little above the Virgin's Spring, and that the Temple-hill was the city of Jebus.

I will endeavour to break first the prongs and then the net.

1. (a) Professor Sayce thinks (1883, p. 211) that the words in the Siloam Inscription "from the spring to *the* pool" show that at the time this was the only pool existing at Jerusalem. He concludes, therefore, that the tunnel must be earlier than the time of Ahaz, as in his reign there existed an *upper* pool (Isa. vii, 3), which implies that there was also a lower one. I answered that in 2 Kings xx, 20, Hezekiah is said to have made *the* pool, although the upper pool existed in the previous reign. There is no reason why a *the* should imply more when engraved on a *rock* than when written on a *roll*. Professor Sayce, however, maintains that my objection has no force, as "there is all the difference in the world" between the two cases.

I find that scholars from four universities decline to endorse his opinion, and one states that he "does not see in the words 'from the spring to the pool' anything to show that this was the only pool in Jerusalem. As far as the words go, they seem to imply only the spring and the pool with which they were occupied."

Thus the inscription cannot be put in as evidence that the tunnel existed before the time of Hezekiah.

(b) Professor Sayce also argues that the tunnel cannot have been made by Hezekiah, because "the waters of Shiloah" (*i.e.*, the conduit) are mentioned previously.

If it has *really* been ascertained that the newly-found aqueduct (1883, pp. 106, 211) does not lead from the Virgin's Fount, then I the more cheerfully own my error, as I can make a better point. I conjecture, with the utmost

confidence, that before the Siloam Tunnel was made, the waters of Gihon (Virgin's Fount) *flowed softly* to Siloam along an aqueduct on the eastern side of Ophel (so called), and that excavation in two or three places will certainly find traces of it. The discovery of such an aqueduct, which obviously would be more ancient than the tunnel, would at once destroy the argument which Mr. Sayce draws from "the waters of Shiloah."

When careful search has failed to find this aqueduct, then I shall be glad to admit the overwhelming weight of (b).

(c) In opposition to my claim (p. 106) that the tunnel is the work of Hezekiah, referred to in 2 Kings xx, 20, it is added (p. 211): "Moreover, the word translated *conduit* is תעלה, which is not the same as the נקבה, or *tunnel*, of the inscription."

What Mr. Sayce means by this objection I fail to comprehend, as on page 215 he observes, "The upper pool, consequently, must be the Pool of Siloam, and *the conduit the tunnel* which conducts the water into it." If in Isaiah vii, 3 the *conduit* may apply to the tunnel (or נקבה of the inscription), why may not the *conduit* (the same Hebrew word) of 2 Kings xx, 20 also apply to the same tunnel? I claim now to have broken prong 1, or at any rate to have reversed its point.

2. Mr. Sayce further thinks that the (upper) Pool of Siloam must be referred to in the words (Isa. vii, 3) "the conduit of the upper pool, in the high-way of the fuller's field." He adds that "the topography of Jerusalem makes it clear that the fuller's field could have been only at the southern entrance into the Tyropœon valley, where water for fulling could be obtained from the Kidron and En-rogel, the modern Bîr Eyyûb, as well as a strip of level ground. This is fully confirmed by the name Enrogel, *the fuller's fountain*." To this I must also object that—

(a) Water was at hand elsewhere, near Jerusalem, as Mr. Sayce himself witnesses. On page 214 he puts "the gathering place," or tank, for the water of the old pool near the valley-gate (as marked on his plan). But for a pool to have been "old" in Hezekiah's time, it must at least have existed in that of Ahaz, and it must have been (so far as I can see) further up the valley, *i.e.*, at a higher level than the Pool of Siloam. Thus the south-eastern side of Jerusalem was not the only place for getting water.

Besides this an old aqueduct (*Quarterly Statement*, 1872, p. 48) exists east of the Damascus gate, which must have carried water to (or from) some pool. Thus far north of the Pool of Siloam we have, according to Mr. Sayce, a *pool* and, as discovery has shown, also a *conduit*.

(b) The word "field" (*sadeh*) has a wide meaning. It is used for "the open country," in contrast to "the city," and so would be as applicable to the ground near the Damascus gate as to the level ground towards En-rogel.

(c) En-rogel strictly means "the spring of the foot," which is not the same as "fuller." As the feet were used in fulling, the Targum explains the name as meaning "the fuller's spring," but another interpretation has been given, and the foot was also used in irrigation. And why should the

occupants of the castle of Zion send their washing all the way to En-rogel, when they could have it done quite as well at home at the Virgin's Fount, like the modern dandy of Kefr Silwân? ("Jer. Rec.," p. 243). Josephus further puts "the fuller's monument" on the east of the Damascus gate.

As, therefore, far north of the Pool of Siloam there was *water*, and a *pool*, and a *conduit*, and a drying *ground*, and a *fuller's* monument, I cannot admit that Mr. Sayce has shown that "the fuller's field adjoined the Bîr Eyyûb," and that "the upper pool, consequently, must be the Pool of Siloam." On the contrary, I have shown that there was a far more suitable spot on the north side of Jerusalem, where Rab-shakeh would be much more likely to deliver his message, instead of down at the south-eastern corner of the city.

Again, according to Mr. Sayce's theory (p. 214), Hezekiah made a tank "for the water of the old pool" in the Tyropœon higher up than the Pool of Siloam, and though he does not state where he thinks "the old pool was," still (as it seems to me) it could not be identical with the Pool of Siloam. As, therefore, we have "the old pool" at a higher level than the Pool of Siloam, the former would more suitably be called the upper pool than the latter. I claim, therefore, to have broken or completely bent prong 2, even if his position for the *tank* be right.

3. Mr. Sayce thinks that there was a valley between the City of David on Ophel (so called), and Mount Moriah, and that on the latter (*i.e.*, the Temple-hill) stood "the city of Jebus." If the German explorers have really ascertained the existence of such a valley across the ridge, and not merely a depression on the backbone of the ridge, as observed by Colonel Warren ("Jer. Rec.," p. 291), then I welcome the discovery as giving the northern limit of the City of David. I observe, however, on page 194, that Captain Conder, who ought to be as well informed on the subject as Mr. Sayce, seems to be strongly opposed to the existence of such a valley. To the second point I would object—

(a) That in putting the City of Jebus on Moriah, Mr. Sayce places Araunah's threshing-floor *within* the city, while the custom seems for such spots to have been outside the walls.

(b) That while Mr. Sayce, in 2 Samuel v, 8, substitutes "temple" for "house" in Authorised Version, others do not think that the Temple is at all referred to, and Kennicott translates the words, "because the blind and the lame said, He shall not come into the house." Thus I cannot allow that the passage implies that "the Jebusites, whose city was stormed, inhabited the higher Temple-hill."

(c) In applying 2 Samuel v, 8 to the city of Jebus, and not to the castle of Zion (1878, p. 130), Mr. Sayce seems to me to have fallen into the popular error which three years ago I found had already been pointed out by "E. F." on "The Book of Psalms." The Biblical account (Sam. and Chron.) speaks only of *one* place being taken (not of *two*, as commonly supposed), viz., the castle of Zion. In 2 Samuel v, 6, the Jebusites, confident in the impregnability of their castle, taunted David. In verse 7 David takes the castle. In verse 8 the sense is clearer if we read "for" instead of

“And.” “On that day” I take to mean, not on the day of the assault, but (as the Hebrew narrative frequently goes back) on the day that the Jebusites and the blind and the lame taunted David.

(d) As I have pointed out that there is full reason for supposing that Araamah betrayed Zion by helping Joab up “the gutter,” or rocky shaft above the Virgin’s Fount, I cannot admit that his threshing-floor on Moriah allows us to infer that the Jebusites still continued to live on the higher hill of Moriah (p. 214), or, indeed, that they ever lived there at all.

Thus I claimed to have turned the point of prong 3, and the trident becomes a useless weapon.

It still remains for me to break the net. I am glad to agree with Professors Robertson Smith and Sayce that Zion was solely on Ophel (so called), and that the Tyropeon was the Valley of Hinnom; only I take the former to have been merely a part of the latter, and the latter to have reached towards the Jaffa gate, and not northwards towards the Damascus gate. I cannot, however, admit that præ-exilic Jerusalem did not occupy the upper hill of Josephus. Professor Robertson Smith’s arguments for his theory (those of Professor Sayce I do not find) are given in the “*Encyclopædia Britannica*,” under *Jerusalem*, to the following effect:—

(1) If the upper city was enclosed by Nehemiah, then no account is given of the defences for nearly half a mile, from the dung-gate (near the Protestant school) to the fountain-gate, near Siloam. But I have pointed out the reason in *Quarterly Statement*, 1879, p. 178. As no one would ever think of attacking Jerusalem on this south side, it would have been labour lost here to throw down its fortifications. Perhaps, too, the rock was scarped to a great height.

(2) He urges that Nehemiah implies that the fountain-gate was near the dung-gate, and that in chapter xii the procession which went to the dung-gate is immediately afterwards found at the fountain-gate. But I cannot admit that “Then I went on to the gate of the fountain” (ii, 14) implies that it was *near* the dung-gate; I should rather say the reverse, and next, as there seems to have been no gate between the two, it is difficult to see why anything should be mentioned between them.

(3) He says, “It is hardly possible that so important a part of the circuit should be twice omitted, and the vast lacuna disappears at once if we suppose that the upper city of Josephus was not enclosed by Nehemiah.” But if the western wall was so slightly injured that one party (iii, 13) could repair the valley-gate and *a thousand cubits* on the wall to the dung-gate,” it is very likely that the still more strongly situated southern wall would need no repairs, and therefore would not be mentioned in either case.

(4) It would have been folly in Nehemiah to enclose a much vaster or less defensible circuit, when the inhabitants were so few that it was necessary to draft a tenth of the whole people into the capital” (Nch. xi, 1). But it seems to me that it would have been far greater folly in Nehemiah if he had not built the city on the line of the old wall, when he had the authority for so doing; and as for the vast area, it agrees exactly with the

Biblical notice (vii, 4): "Now the city was large and great; but the people were few therein, and the houses were not builded."

(5) Once more, by placing the valley-gate quite near the Temple we understand how it was in this neighbourhood that the second procession in Nehemiah began its course. The "how" is not clear to me, but I do see that in such a case one party must have marched a very much longer distance than the other, which seems to me an improbable arrangement.

(6) When Professor Sayce excludes the upper hill from præ-exilic Jerusalem, he has also to face the arguments about the area of the Holy City which Captain Conder has erroneously urged against me (p. 195).

(7) He has also to account for the meaning of the old arch anterior to, but on the line of, Robinson's arch, and to explain why it should have been erected at a point far outside the walls of his Jerusalem ("Jer. Rec.," p. 110).

Having answered all the arguments offered on this point, I claim that Nehemiah enclosed the upper city.

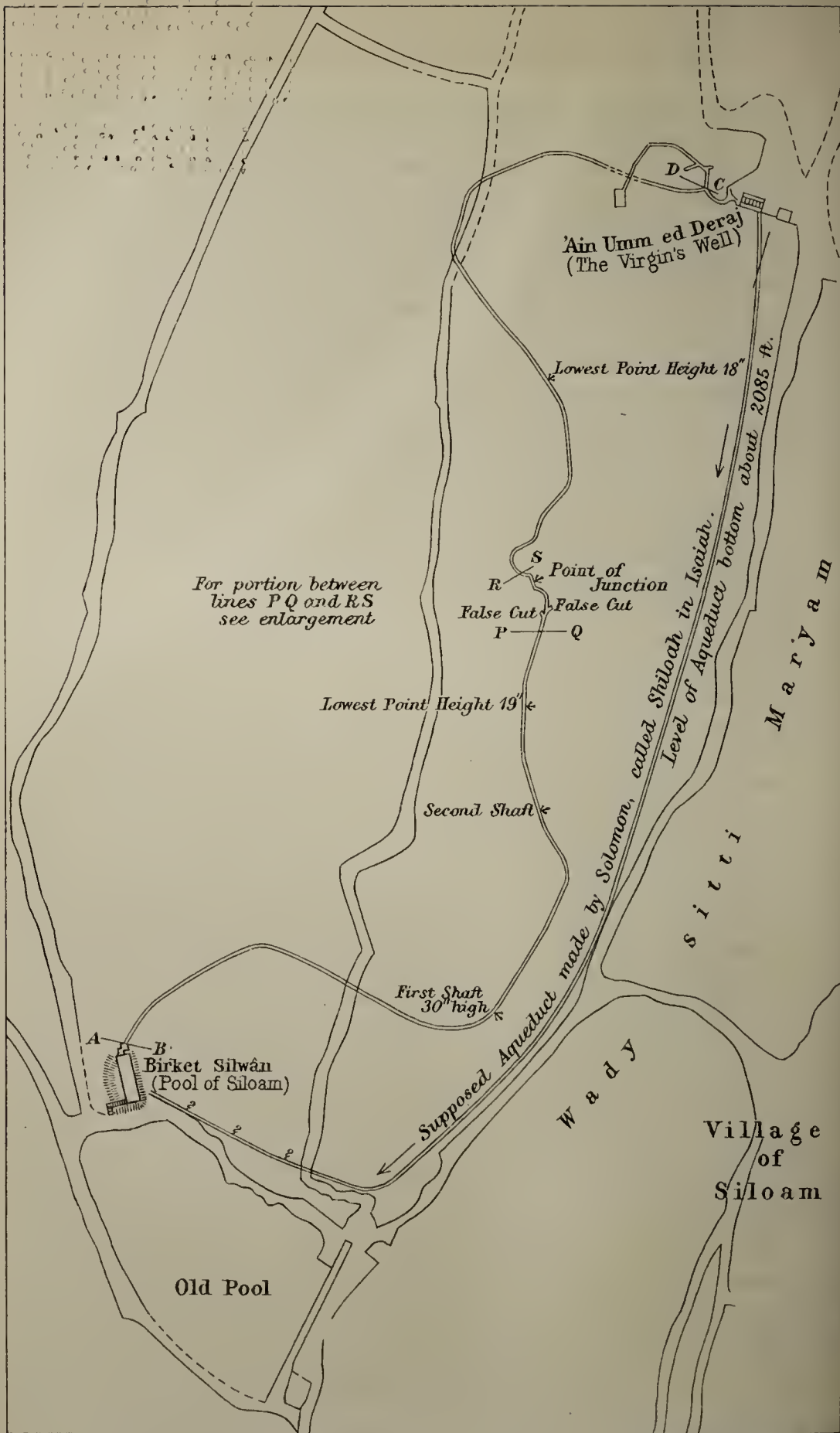
Therefore the net also is broken, and as the trident is useless, it is now open to me to turn *secutor* and pursue my antagonist to the very gates of Jerusalem.

"The gate of Ephraim" = "the gate of the Potteries," according to Professor Sayce's plan; but on page 218 he says, "the gate of the potteries seems to be the valley-gate," and on his plan "the valley-gate" is placed at the western exit of the (supposed?) valley which separated Zion from Moriah; and lastly, on page 218 it is said that "the fish-gate was at the western exit of the (same) valley." Surely some explanation is needed here, as, according to Nehemiah iii and xii, the Fish, Ephraim, and Valley gates were three distinct gates.

On page 214 Mr. Sayce says that here "through the gate between the two walls (probably the potteries' gate) Zedekiah fled along the valley of the son of Hinnom . . . past Enrogel and Marsaba" (!). Surely when "the Chaldæans were by the city round about," it is incredible that the Jewish king would begin his flight by half a mile's pleasure trip outside the city walls under the nose of the enemy posted (according to Mr. Sayce) on the upper hill; and next, that he should go past Marsaba, miles out of his way, is still more startling. Here the *retiarius* seems to get entangled in his own net, and to be caught romancing by the *mirmillo*. For what is the authority for this last statement? Not the Bible nor Josephus. If my old friend Herodotus, I will believe it; but it looks more like a dragoon's answer to a leading question. Perhaps Mr. Sayce did not revise his papers.

But I see the *Editor's* thumb is coming down, so I must be quick with one more blow, or my pet theory will go unavenged.

Of my lucubrations on Jerusalem the one that would most interest the general reader, I take to be that which shows that the shaft discovered by Colonel Warren at the Virgin's Fount was the scene of Araunah's treachery in connection with Joab's ascent of "the gutter." And now Mr. Sayce (p. 211) says that the rock-cut shaft and passages are of "later" date than



the Siloam Tunnel, and were made by Hezekiah. Thus in self-defence I must offer the most uncompromising resistance to his *dictum*, as I had rather lose all the points named above than this last one by itself.

(a) Colonel Warren's plan (No. 18) states that the passage to the vertical shaft is in a line with that from the Virgin's Fount, while the tunnel to Siloam is marked as turning off at an angle. From this he concludes that the passage to the shaft was made before the tunnel.

(b) Mr. Sayce (p. 211) says, "This second tunnel—*i.e.*, the one to the vertical shaft (or *A*)—is in connection with the Siloam one, a perpendicular shaft (or *B*), descending to the latter below the vaulted chamber, and appears therefore to be of later origin." Here he is under some misapprehension; as *A*, which descends to the water, is *not* under the vaulted chamber, and *B*, which is so, was found partly filled up and was never explored.

Colonel Warren, however, conjectures that as the rock-cut passages and *A* would be inconvenient for drawing water, at some later date *B* was excavated to the level of the water in the Siloam Tunnel, though it does not seem actually to descend into it. *B*, no doubt, is later than either the Siloam Tunnel or *A*, but this does not at all prove that *A* is of later date than the Siloam Tunnel itself.

(c) Mr. Sayce appears to think that Solomon made the Siloam Tunnel in order that his capital might not have to depend upon rain-water in time of siege. It is, however, not complimentary to his surpassing wisdom to maintain that he executed a work of such enormous magnitude merely for such a reason, when Colonel Warren's shaft and passages would attain the same result with a mere fraction of the labour. The object of the tunnel was rather to deprive the enemy of the use of the overflow of the waters from the Virgin's Fount.

I maintain that the shaft *A* was used by the Jebusites, and (a) alone proves that it was older than the Siloam Tunnel. And even if it can be shown that the latter is of Solomonic date, it only helps to prove the point I value most.

W. F. BIRCH.

THE WATERS OF SHILOAH (OR THE AQUEDUCT) THAT GO SOFTLY.

Isaiah viii, 6.

It seems to me as certain as any point not yet ascertained to be a fact can be said to be certain, that these waters flowed from the Virgin's Fount along an aqueduct (cut in the rock) on the eastern side of Ophel (so called) southward to the entrance of the Tyropœon. Little or no fall would cause the water to flow (or go) *softly*. Therefore, as the present level of the Virgin's Fountain is 2,087 feet, we may expect the waters, before the Siloam Tunnel was made, to have flowed at about the same level.

It seems probable, therefore, that if the side of Ophel was bared to the natural rock between the Virgin's Fount and the entrance to the Tyropœon valley, traces of the above-named aqueduct would be discovered at a level of about 2,087 feet, but the search ought to be extended from about 2,080 feet to 2,090 feet. Probably the aqueduct would be a narrow trench a foot or two broad, cut in the rock perhaps 3 feet deep, and covered over with slabs of stone.¹ As possibly the aqueduct might in some places be destroyed when it fell into disuse on the completion of the Siloam Tunnel, it is quite possible that in searching for the aqueduct, the exploring party might excavate at some of these places, so that if no result attended the first attempt, a second or even a third ought to be made at some other part of its course.

Thrupp's opinion that the waters of Shiloah represented *the line or house of David* has for five years commended itself to me.

I believe he thought that they were brought by an aqueduct from Bethlehem. When it became clear to me that the City of David was on Ophel (so called), and that the Virgin's Fount was the ancient draw-well of Zion, by means of the subterranean passage and shaft discovered by Colonel Warren, it seemed to me that the fittest explanation was that the waters from the Virgin's Fountain were the waters of Shiloah, though I did not see how, in the time of Ahaz (for I believed and believe the Siloam Tunnel was made by Hezekiah), these waters from the Virgin's Fount could have given the name of Siloah to a spot near the present 'Ain Silwân. Professor Sayce thinks that the waters from the Virgin's Fount flowing along the Siloam Tunnel thereby got the name of *Shiloah* from the *tunnel* or *aqueduct*, and so was given to the pool the name of Siloah or Siloam. Therefore, he argues, the tunnel existed in the time of Ahaz, and must have been made by Solomon as the only probable author of water-works before Hezekiah.

The discovery of another aqueduct, which it was supposed brought water *directly* to the lower Pool of Siloam, *i.e.*, without passing through the upper Pool of Siloam, suggested to me what I believe is the true explanation of the difficulty. Even if it has been proved or could be proved that this new aqueduct only led from the upper Pool of Siloam, still this circumstance would not alter my opinion as to the true explanation.

The following considerations influence me in this conclusion :—

¹ As the aqueduct would be made only for irrigation, not from military considerations, it is unlikely that it should have been tunnelled through the rock instead of merely a channel being cut in the rock. This latter at that time could be made with little expense and in a short time, as many could work at it together. If there were no such aqueduct as I suppose, then it seems to me inevitable that the Siloam Tunnel was made by Solomon; but this seems to me so utterly out of the question that (though I am aware it is better not to prophesy until you know) I wish to prophesy that the aqueduct will be found if looked for carefully.

1. It is reasonable to apply Shiloah, Siloah, and Siloam to one spot, *i.e.*, the part of the Tyropœon near 'Ain Silwân, and not to different places.

2. The waters of Shiloah must, somehow or other, have come from the Virgin's Fount.

3. But they could only be brought down by some aqueduct to the southern end of the Tyropœon.

4. They could not have flowed down the Siloam Tunnel, as the date of that seems (to me) to have been the time of Hezekiah, and the waters of Shiloah are named previously in the time of Ahaz.

5. Therefore the only explanation available is that there was an aqueduct from the Virgin's Fountain along the eastern side of Ophel to the mouth of the Tyropœon.

6. If the aqueduct was made with but little fall, the waters would go or flow *softly*.

7. If it is urged that there may have been an aqueduct down the Tyropœon, one would reply, Where would a better source of water than the Virgin's Fount be found? and next, the fall down the Tyropœon would be such that the waters could hardly be said to go *softly*, but rather swiftly.

8. I believe the aqueduct supposed to exist in (5) was made by Solomon to irrigate the lower part of the Tyropœon (south of the 'Ain Silwân), *i.e.*, the King's gardens. It seems to me reasonable to think he would make some such use of the superfluous waters of the Virgin's Fount, instead of letting them run to waste through the soil of the Kedron Valley.

I would therefore put before the Executive Committee of the Palestine Exploration Fund a proposal that search should be made for this aqueduct.

Its discovery would result in clearing up certain points.

(a) It would be a point gained to know that such an aqueduct existed.

(b) What is meant by the waters of Shiloah would be clear.

(c) There would no longer be any room whatever for two opinions about the date of the Siloam Tunnel.

(d) I would add, from my own point of view, that a stimulus would be given to making further excavations at Jerusalem.

I trust, therefore, that the Committee will not put this question aside as an unlearned, or at any rate groundless, speculation.

W. F. BIRCH.

Manchester,

November 5th, 1883.

THE CITY OF DAVID AND JOSEPHUS.

SOME of Captain Conder's remarks on p. 194 call for notice.

The Garrison.—As he objects to my words on this subject, I would add that Patrick, on Judges ix, 6, observes: "And after all it must be confessed

that the *Hebrew* word *Matzab* doth not certainly signify a *pillar*, for I cannot find it so used in any other place of Scripture." How then am I wrong in saying that *Matzab* never means a *pillar*, and that it is an entire mistake to say it is rendered *pillar* in other passages? Judges ix, 6, is one; but where is the second passage? His favourite authority on 1 Samuel xiii, 3, mentions a garrison, not a *pillar*, so that it is *my* turn now to ask, "Is this another false statement of Josephus?"

The fact is, Josephus is a most uncertain foundation on which to build. Even in cases where he can say *quorum pars magna fui* he sometimes is *startling* rather than *accurate*. Who would not like to see the stone that at Jotapata knocked off a man's head and sent it *three* furlongs? The Jews might indeed have called that a *sacred* stone. The proposal to convert the *two* garrisons which, according to the Bible and Josephus, Jonathan smote into *one* and the same sacred *stone*, upset first at Geba and then on Bozez, I still claim to describe fairly as "an *idol* fancy." Jonathan commanded a division and was no contemptible (2 Sam. i, 21) foe. Would Captain Conder, with a thousand men, himself prefer shattering a *stone* column of the enemy to a living one? Why then make a warrior like Jonathan into an iconoclast? On page 150 *seven* should be *six*.

The Nameless City.—I regret that Captain Conder and others should be in doubt as to what I think the true site. See, however, *Quarterly Statement*, 1883, page 49, line 7, and page 51, line 38.

The Tomb of the Kings.—I need hardly repeat that Captain Conder said "it is a *fact*" (not a conjecture of his) that the tomb of Nicodemus is this tomb. He says of me that I have been "equally confident" that I knew "the exact place of the tombs of the Kings, on more than one occasion, but in very different situations." Can he point out the passages in these pages on which he grounds this statement? Is *equal confidence* shown by the *if* in *Quarterly Statement*, 1877, page 200, line 42, or by the *seven points* distinctly said to be *assumed* in 1881, page 97, 99, or in the position given in 1883, page 155, "an *area* of 450 feet long by 50 feet broad?" And is this description, or even *the less than forty yards* of 1880, page 170, at all to be compared to the precision of Captain Conder's site, viz., *the tomb of Nicodemus*?

I only refer to this point because I hope the Committee will be led to excavate specially for the Tomb of David. But how can this be until a site has been named of reasonable area, which can both stand against all adverse criticism and also have reasonable probability in its favour?

For Captain Conder, and others who have sought after Zion, to rally me on my failures or attempts is rash, as I can easily retort with crushing effect as follows.

True, I have been groping for six years on Ophel, so called—"an area of 10 or 15 acres"—for the entrance to the Tomb of David, *i.e.*, for a hole about 2 feet square, and buried some feet under the surface.

But others have also for years been running all about Jerusalem and looking everywhere for Zion except in the right place: one put the City of David on the Upper Hill, another at Antonia, another near the Holy

Sepulchre, another just east of it, another of larger ideas thought that the whole of Jerusalem formed the City of David. They have been wandering all over the 300 acres, minus my 15, and you have not yet found, and never will find, in all that area, either the door of David's tomb or the famous City of David, an object a few ten thousand times larger than what I have been seeking for.

Ophel (so called).—On page 194, 1883, Captain Conder speaks of this as “a hill which was only walled in by later kings ;” but six lines after he finds fault with me for speaking wrongly of the same spot as “the hill ” on the south of the Temple. I suppose he must have changed his mind in six lines. In exposing what I consider his radical errors about Jerusalem, I pointed out (1881, p. 97) what was apparently the position of Ophel. I can hardly blame him for not answering in detail the arguments given in *Quarterly Statement*, 1881, pp. 94–97, and 1883, pp. 152–154, as they are simply unanswerable. I hope, however, that he or any one else who dissents from my view will try to answer them.

The old wall.—Captain Conder, after observing that Josephus says, “The old wall built by David and Solomon began on the north at Hippicus,” asks, “Is this another false statement ?” I am not aware of having alluded to this statement, yet I think Josephus is very near the truth. I would observe, however, that Josephus goes on to add that the same old wall passing above Siloam reached as far as Ophel, where it was joined to the eastern cloister of the Temple. Captain Conder will, I suppose, admit that the part of the wall from Siloam to this south-east corner was on Ophel so called, and his favourite authority further gives it as part of *the old wall*. And yet (*mirabile dictu*) only two lines after, Captain Conder describes the very site of this part of the wall as “a hill which was only walled in by later kings.” Thus he himself actually rejects the very description of Josephus about which two lines before he asked me, “Is this another false statement ?” He says, “We” (*I decline to be among the we*) “are obliged to rely mainly on Josephus,” and accordingly he will not allow me (if I wished) to say that the *beginning* of a statement of Josephus is false, while he himself, by his own *ipse dixit*, rejects the *end* of it as false.

The area of the City of David.—When I speak about *Zion, the City of David*, Captain Conder appals me with the area of *Jerusalem*. But the size of the former had no more to do with that of the latter, than the area of the Tower of London with that of the City of London. I have again and again shown that *Jerusalem* and *the City of David (i.e., Zion)* are not in the historical passages of the Bible identical. (See 1878, p. 183 ; 1880, p. 167 ; 1881, p. 97.)

Josephus, I am well aware, makes them the same, but the Bible does not ; and who that cares for accuracy will believe what Josephus says, when he does not agree with the Bible ? In this book of truth the line of distinction between Jerusalem and the City of David is sharply drawn. Of one or another king it is said quite twenty times, in the Kings and Chronicles, that he reigned in Jerusalem and was buried in the City of David. Surely

if the two terms meant just the same thing we should have had some instance of a king *reigning in the City of David*. Of Amaziah it is written (2 Kings xiv, 20), "He was buried *at Jerusalem* with his fathers *in the City of David*." Why add the latter words if the two places were identical?

And now, having disposed of all objections, let me loose a Parthian shaft. I have given arguments for the Valley of Hinnom, Zion, and Acra, which none can answer, and (if they are discreet) will not try to answer.

For five years I have been urging that the Tyropœon was (part of) the Valley of Hinnom, and that the City of David was solely on Ophel so called.

Enough for me now (further success I leave to others) to have got the thin end of the wedge into the Jerusalem error. That it is being driven home can hardly be denied, when while Captain Conder, on page 194, seeks to scare me with terrible conclusions that do not follow from my premises, independent critics are found maintaining the view I hold.

On pp. 213, 215, Professor Sayce says: "The key to the whole position is the *fact* that the south-eastern hill, the so-called Ophel, represents Zion, the City of David. This *fact* once granted—and it is now no longer possible to deny it—&c."

Again, Professor Robertson Smith, in the "Encyclopædia Britannica," on Jerusalem, observes: "A third view places the City of David on the southern part of the Temple-hill, and this opinion is not only confirmed by the oldest post-Biblical traditions, but is the only view that does justice to the language of the Old Testament." I commend these two statements to Captain Conder's calm consideration.

Therefore to Zion's enemies, whose name is *legion*, I shout, Come on! You cannot get over the Biblical evidence. If I never strike another blow, the two Professors will "hold the bridge," and save the City of David from desolation.

I heartily agree with these two on the two points discussed, though I cannot at present go with them in the opinion that the Upper City of Josephus never formed part of fortified Jerusalem till after the time of Nehemiah. If I leave their theory in peace, a slow pen and doubtful leisure must bear the blame. I must make the same plea if I do not try to show in these pages that—

- (1) Gibeah of Saul was at Kh. Adasah.
- (2) The Cave of Adullam is the Cave of Khureitun.
- (3) The perpendicular shaft at the Virgin's Fountain is "the Gutter" of 2 Samuel v, 8, though attributed to Hezekiah by all, I believe, except myself (1878, p. 184).
- (4) The Tomb of David (so far as I can discover) was in the position given in *Quarterly Statement*, 1883, p. 155.

I am glad to see an anonymous critic in *The Builder* (p. 545) coming to the aid of Captain Conder. This knight of the paper visor charges down upon my theory, confident of its destruction, and hopeful that the Fund will bury it by henceforth excluding from its pages "old unlearned speculations."

I pause not to discuss whether my theory is *old* or not, for I would rather at once cut his girth, and let him topple over.

This writer has a profound contempt of what I advance as "my arguments" for the true position of *Zion*. Accordingly, instead of labouring to meet them, he prefers re-echoing Captain Conder's declamation about the acres of *Jerusalem*.

"Great is Josephus!" cries the one; "Great is Josephus!" answers the other, and, as this historian says David called Jerusalem the City of David, it is vain for me, in a feeble tone, to interpose again and again that the City of David was only part of Jerusalem. I have doubted Josephus (a thing which Captain Conder does whenever it suits him). Therefore, I am to be overwhelmed with alternative billows of indignation and pity, on the ungrounded charge of having made Jerusalem no bigger than a hamlet. In vain from time to time I have taken pains to explain that the City of David stood only on Ophel (so called), and that Jerusalem and the City of David are not convertible terms (1883, p. 154). But what do these two writers? Instead of trying to show that the places were one and the same, Captain Conder begins by speaking of the City of David, and then, with charming simplicity (I should say *adroitness*, only I think he is unconscious of his own legerdemain), he slips in (p. 195) *Jerusalem*, instead of the City of David, in the words, "But Mr. Birch's *Jerusalem*, or City of David, is only 10 or 15 acres in area." After this, and tossing in *Moriah* (!) with a sort of *væ victis*, Captain Conder triumphantly shows that my statement, as doctored by him, is wrong; while the other returns after him only to spoil, and finds out that the Jews would have to occupy just one square yard apiece.

In 1878, p. 180, I made the following suggestion:—"Gennath = (?) Gehennath Gate = Gate of the Valley of Hinnom = Valley Gate (2 Chron. xxvi, 9; Neh. ii, 13; iii, 13)." Captain Conder borrowed this conjecture from me (I am not aware that I borrowed it from any one), and further, he did me the honour of putting it both in his plan and on p. 349 in the "Handbook" (1879), and there it remains to this day. Again, in 1879, I occupied three pages in tracing the general outline of Nehemiah's Jerusalem, referring to (if not inserting) his plan of 1877, and actually making my Jerusalem *larger* than his within the first and second walls of Josephus.

But now (oddly enough), in 1883, Captain Conder has quite forgotten his debt to me, and mine to him. He even ignores his own "Handbook," whose pages witness that my Jerusalem was no "hamlet" of "10 or 15 acres;" but occupied as great an area as his own.

Surely when the builder-on-sand critic tries to entice the Committee to cast me out, I may claim, by my appeal to the "Handbook," to have unhorsed Don Quixote. Why ever will some persons persist in advocating a *lost* cause?

I have to thank Mr. Besant for an admirable illustration, which I doubt not will make more converts than can pages of the closest argument. He says, "Did you ever see Old Sarum? It contained a cathedral with a

monastery, a castle, and a town ; all within a space large enough for a London square garden." The fortress of the Jebusites, *i.e.*, Zion, or the City of David, was just a place of this kind.

The cathedral answers to the tent pitched for the Ark.

„ monastery	„	houses for Obed-edom, &c.
„ castle	„	David's house.
„ rest of the town	„	the quarters of the <i>Gibborim</i> and other dwellings.
„ churchyard	„	the Sepulchres of David.

That "a city" was not necessarily a large place seems clear from 2 Kings x, 25, where "the city of the house of Baal" appears to describe the dwelling-place of Baal's priests.

W. F. BIRCH.

November 2nd, 1883.

HEBREW INSCRIPTIONS.

IN connection with the article on Hebrew inscriptions, which I have read with deep interest in the *Quarterly Statement* of last October, may I hope that you will allow me to throw out a suggestion concerning another matter which I believe to be of great importance? In Jewish books we often meet with a contraction of the two letters **חא**, thus **ח**, which is not used in printing the Bible. The origin of this contraction has, so far as I know, never been investigated. Yet it is easily seen that if it was used by copyists of the Bible in early times, it was likely to have been a fruitful cause of very great mistakes. Hence, whilst students and explorers have their attention directed to the alphabets, I think it a good opportunity that they be requested, in the interest of textual criticism, as well as for other important purposes, to see also how far back they can discover this contraction to have existed. I believe I can see traces of it in the Septuagint in the following names :—

(1) **Ιεμουηλ** for **חמול** (Hamuel), Genesis xlvī, 12, and 1 Chronicles ii, 5. Any one studying the names of the Septuagint will know that **ηλ**, with another vowel before it at the end of a word, stands always for the Hebrew **חא**. See **Ισραηλ**, **Σαμουηλ**, **φανουηλ**, for **פנואל**, **שמואל**, **ישראל**. If there is no vowel before **ηλ**, it may represent only a **ח** with the vowel *Tsere* before it, as **Εσηλ** for **חציל**, **Γαδηλ** for **גדל**. If, then, we have here this termination standing for a **ח** only, what more likely than that the Seventy read the abbreviation **ח**, instead of the **חא**, especially as the name **חמול** (Hamuel) also exists in 1 Chronicles iv, 26, and is rendered **Αμουηλ**?

(2) Another name in which a final \aleph seems similarly to have been taken for \beth , is \aleph במהל ; 1 Chronicles vii, 33 rendered Βαμηνλ.

(3) Another name with \aleph mistaken for \beth , is \aleph ירהע (Jarha), 1 Chronicles ii, 34, 35, rendered Ιωχηλ, which should be Ιορχηλ, because ω is often a corruption of two letters which in the Uncial alphabet have some roundness about them.

(4) Then we have, 1 Chronicles v, 32, 37, Μαριηνλ for מריות, which seems to show that their contraction was sometimes written thus, \aleph .

(5) It is also well known that names beginning with \aleph in Hebrew have Ελ in Greek. Hence, 1 Chronicles xv, 18, και Ελιωηνλ for \aleph ועני (and Unni), shows that they read \aleph וליני, and rendered it και Ελιωναι; a name of frequent occurrence, and occasionally corrupted in the Septuagint. Here it is corrupted into Ελιωηνλ, for η is often interchanged with ν , and λ with α . (See Appendix I in my "Scripture Onomatology.")

In all these passages, whether the contraction really existed in the Hebrew, or was only imagined to exist, the proof that the translators were acquainted with it is the same.

(6.) The final and superfluous $\eta\lambda$ of the last word in 1 Chronicles xii, 5, Χαραιδηνλ for \aleph הרפתי (Haruphite), I believe proves the same in a different way. It does not occupy the place of other letters, but evidently represents a mistaken repetition of the \aleph of the first word of the next verse, \aleph אלקנה, rendered Ελκανα. But such repetitions between two words following each other, though very frequent with single letters, occur very seldom if ever with two or more consecutive letters. Therefore the first cause of the above mistake must have been the \aleph having been written in a contracted form in their copy.

E. FLECKER.

THE SITE OF EMMAUS.

THE identification of *Urtás* with Emmaus is one of the most interesting discoveries recently made in Palestine. It is remarkable that the scene of our Saviour's journey with His two disciples on the day on which He rose from the dead should have remained unknown for nearly two thousand years, though extending only to a short distance of seven and a half miles from Jerusalem. It is evident that the locality was not meant to remain concealed, for Luke gives the name of the village to which the Lord and His disciples went, and also its distance from the city—both of which are also given by Josephus, the Jewish historian. In the *Quarterly Statement* for January last year Mrs. Finn has furnished the most conclusive evidence in favour of *Urtás*, and excluded all other claims. When her home was in the Holy Land she visited every valley within the circuit of sixty furlongs from

Jerusalem, but found none with a sufficient supply of water for the baths mentioned by Josephus, except the valley of Etham, in which is the pretty village of *Urtâs*, a little to the south of Bethlehem. At length excavations were made on the spot, and in these she had the valuable aid of Mr. Cyril Graham ; and among the ruins were discovered the walls of the fortification which had been built most probably by the Roman soldiers to whom, Josephus says, the Emperor Vespasian granted the place. Baths too were discovered, and the name *Hammâm*, signifying baths, was found to be preserved among the *Fellâhîn* of the locality—a name which corresponds to the Hebrew Hammath and the Greek Emmaus. The name *Urtâs* is evidently a corruption of *Hortus*—a name which the Roman soldiers gave to the place from the gardens of Solomon, which were in this locality. Similar changes of names we have in Nablous for Neapolis, and Jaffa for Joppa.

The evidence in favour of *Urtâs* as the true Emmaus appears to me to be complete, no link in the chain being wanting ; and had I known the story of this discovery three years ago, this knowledge would have materially enhanced the interest with which I made the journey from Jerusalem to *Urtâs*. Mrs. Finn deserves great credit for the indomitable perseverance with which she prosecuted her inquiry for ten years, and for the clear statement of the details by which her identification of the site has been fully established.

It is somewhat disappointing, however, to find that Dr. Edersheim, in his elaborate and meritorious work on the “Life and Times of Jesus the Messiah,” gives a very imperfect account of Mrs. Finn’s discovery, and refuses to accept of *Urtâs* as the true site of Emmaus. His objection is, that the baths at *Urtâs* were not filled by hot springs, but only by water artificially heated ; and he seems to think that this objection sets aside the whole evidence in favour of the discovery. In a volcanic country like Palestine the hot springs of one period may afterwards have become cold ; but there is a well-known hot spring near the shore of the Sea of Galilee and there may have been one, two thousand years ago, in the valley of Etham. Besides, hot springs are not necessary in order to having warm baths ; and it is well known that the Romans had artificial hot baths in their bathing establishments. The name Emmaus does not signify hot springs, but warm baths, which might be obtained either by natural or artificial means.

Dr. Edersheim contends for *Beit Mizza* as the site of Emmaus—a contention for which there seems to me not the shadow of evidence, but, on the contrary, insuperable objections. As he objects to *Urtâs* on the ground that there are no hot springs for baths there, his readers might at first suppose that he must have found such springs at *Beit Mizza* ; but he finds no hot springs there, and no baths, either hot or cold ! He ought to have been sure that the necessary springs are there, before adducing their absence as an insuperable objection in another case. If their absence is good against *Urtâs*, it is equally good against *Beit Mizza*. But it is a fatal objection to his foundling, that the place is only about four miles from Jerusalem—as he will see by consulting No. 17 of the large Map of the Exploration Fund. As

the crow flies, it is about the same distance from Jerusalem as *Kolonieh*, and it is only a mile distant from the latter place. Dr. Edersheim has been misled by a writer in the *Quarterly Statement* for 1881 (p. 237); but the supposed discovery is a pure fiction, with not one good argument in its favour. In all probability the original writer has abandoned it after seeing Mrs. Finn's conclusive paper. But Dr. Edersheim had written a description of our Saviour's journey under a certain supposition regarding the *terminus ad quem*; and when Mrs. Finn's paper informed him that he ought to turn from the city to the south instead of the north-west, he might have yielded by cancelling a page of his book, and substituting Mrs. Finn's delightful narrative. But he lost his opportunity and still asserts, "I regard *Beit Mizza* as the real Emmaus." Let the reader compare with Dr. Edersheim's note the summary we have given of the evidence in support of Mrs. Finn's discovery, or, what is better still, her whole paper in the January number of the *Quarterly Statement*, and we are persuaded that the comparison will lead to the conviction that now at last in *Urtâs* we have found the true Emmaus.

P. MEARNs.

Coldstream.

TWO INSCRIPTIONS OF KING NEBUCHADNEZZAR ON LEBANON.

(Reprinted from the "*Times*" of December 29th, 1883.)

FORTUNATELY, from time to time some consoling genuine discovery is made to compensate us for the too frequent vexation caused us by the Syrian forgers. Here is one quite recent, which the readers of the *Times* will have the pleasure of being the first to become acquainted with, and which they may, I can guarantee, accept with entire confidence. It has been communicated only some hours since to the Académie des Inscriptions et Belles Lettres, by one of its most distinguished members, M. Barbier de Meynard, the well-known Orientalist. I am able to give a substantial account of it after the original documents, which have been placed at my disposal.

The matter is two large unknown inscriptions of Nebuchadnezzar, found on Lebanon by M. Pognon, Assistant-Consul of the French Republic at Beyrout. It must be confessed that such a discovery could not have fallen into better hands. M. Pognon is a young Assyriologist, who has already given proof of his capacity by some excellent publications, such as that of the "Inscription of Bavian." He is one of the most brilliant scholars of the École des Hautes Études, where I have had personally the opportunity of appreciating his worth, when he attended my lectures upon Oriental archæology. One cannot but congratulate him upon the good fortune which has fallen to his lot, and of which he is in every way

deserving. These texts are engraved on the rock, in the Wadi-Brissa, one of the wildest valleys on the eastern slope of Lebanon, about two hours from Hermel, a village situated near the Orontes, and well known by a curious Phœnician or Syrian monument, which has often been described. The two inscriptions are placed opposite to each other on the right and left of the pathway occupying the hollow of the valley. They measure about 5 mètres 50 in breadth by 2 mètres 80 in height. They are written, the one in archaic and the other in cursive cuneiform characters, forming a whole of 19 columns. Each one is accompanied by a *basso-rilievo*. That of the first inscription represents a personage with the Assyrian tiara as head-dress, turned towards the left, and seizing an animal standing erect on its hind legs, possibly a lion. Behind this personage there must have been the image of a divinity; it has completely disappeared, but one can still read underneath :—

“To the goddess
 “Who exalts
 “Who inhabits the temple of Goula, the temple.
 “.
 “.

The *basso-rilievo* of the second inscription represents a man in adoration before a tree with a rather curiously-shaped pointed cap on his head, somewhat similar to the mitre, closed at the top, which is worn now-a-days by bishops.

The two inscriptions each contain a different text. They commence by the titles of Nebuchadnezzar :—“Nebuchadnezzar, King of Babylon, the Illustrious Pastor, the servant of Merodak, the great Lord, his Creator, and of Nebo, his illustrious son, whom his Royalty loves.”

Unluckily the two inscriptions do not comprise any historical passage. The king merely gives an account of the buildings he is having constructed in Babylon. A great number of passages are reproduced, with different readings of more or less importance, in texts already known. Especially may one read, in the fourth column of the inscription written in cursive characters, in a phrase which is by mishap mutilated, the enumeration of the wines figuring on the table of the god Merodak and of the goddess Zarpanit, which enumeration is already to be found on the cylinder of Phillips. However that may be, these two texts, as comprehensive as neatly engraved, would be of great value if they were not in a deplorable state of obliteration. The lower part of one of the two inscriptions and the middle of the other have entirely disappeared, and that which remains is much damaged. Some nomadic Metualis have asserted to M. Pognon that less than ten years ago, a Moghrabi, passing through Hermel, had the inscriptions shown to him, and had cut through the rock, hoping to find a treasure. This tradition seems very credible, for the stone has been cut away to the depth of several centimètres with an iron instrument. There may still be found on the ground some broken fragments of the *basso-rilievi*, proving that the mutilation of the monument is quite recent.

Do the inscriptions of Wadi-Brissa indicate the place where the armies of Nebuchadnezzar passed? M. Pognon does not think so. He is rather of opinion that these texts mark the site of a timber-yard, where trees were cut to be sent to Babylon. The name of Lebanon is repeated several times in mutilated sentences, where it is a question as to the wood employed in Nebuchadnezzar's buildings. The absence of all historical indication would be inexplicable if the inscriptions had been engraved in commemoration of the passage of the armies of the Babylonian conqueror.

M. Pognon has taken squeezes of the two inscriptions, and will publish them shortly. It is very desirable that at least photographs of them should be executed, and mouldings taken, before the originals, already so seriously injured and exposed to the vandalism of the natives, have suffered new and irretrievable harm. The treasure-seekers are, in fact, one of the scourges of antiquities in Syria. I know it from personal experience, and I have often, alas! found too visible traces of their manner of investigating the ancient monuments. Some day I will give a few curious details on this subject. I will now only incidentally remark that the archæologist can occasionally turn to account this kind of Arab lunatics, devoured by their thirst after gold.

The supposition of M. Bognon on the general purport of these two texts becomes very probable if one compares it with certain facts more or less known, which I will allow myself to point out or to recall.

In the first place, we are aware, from the other inscriptions of Nebuchadnezzar which have reached us, that the great King of Babylon employed a considerable quantity of wood for his sumptuous building of temples and palaces. In one of these inscriptions, preserved in the British Museum, he even says expressly "that he has employed for the woodwork of the Chamber of Oracles the largest of the trees which he has had conveyed from Mount Lebanon."

At all times, moreover, Lebanon appears to us as an inexhaustible source of building timber. Every one remembers the timber—cedar and fir—cut in Lebanon and sent by Hiram, King of Tyre, to David and to Solomon for the construction of the Temple and the Royal Palace at Jerusalem.

The prophets show us, on different occasions, the forests of fir trees covering the slopes of this celebrated mountain as the "Glory (*Kabod*) of Lebanon." It is from Lebanon that the Phœnicians, and after them the conquerors of Syria, obtained the materials for their naval constructions. Lebanon, which had in this respect furnished precious resources to Alexander and his successors, played the same part until the Roman epoch. All that part of High Lebanon comprised between Sannin and the Pass of the Cedars, in the middle region of Toula, as far as Semar Jebeil, is still covered with hundreds of Latin inscriptions, engraved on the rock, and reserving for the State, as M. Renan has shown perfectly, in the name of the Emperor Hadrian, the four species of trees necessary, according to Vegetius, for the requirements of the Imperial fleets—the pine, the larch, the fir, and the cedar (*Imperator Hadrianus Augustus: arborum genera iv; cetera privata*).

It is curious to compare this epigraphic document with a verse of Isaiah (lx, 13), which appears to me to offer a striking similarity to it—"The glory of Lebanon shall come unto thee, the *berosch*, the *tidhar*, and the *teashour* together, to beautify the place of my sanctuary." The *berosch*, the *tidhar*, and the *teashour* (the improbable box of the Authorised Version) seem designated as four resinous species, upon the botanical identity of which there is a difference of opinion. Add to these three trees the cedar comprised in the parallelism, under the usual metaphor of the glory of Lebanon, and you obtain the very four species which are mentioned in the inscriptions of Hadrian and correspond with those enumerated by Vegetius.

It may not be impossible that the two inscriptions of Nebuchadnezzar may be referred, at an interval of several centuries, to a similar order of ideas, and concern, in all or part, the preservative measures taken by the king for the forests, whose working was the privilege of the Crown. Nebuchadnezzar is not, moreover, the first foreign conqueror who has utilised the riches of Lebanon. On the *basso-relievos* of the bronze gates of Ballawat one sees the Assyrian soldiers of Shalmanazar II carrying down beams of cedar wood from Lebanon. We know, from other sources, that this king, after having received the tribute of Tyre, Sidon, and Gebal, had his statue erected in Lebanon, where he had been to get cedar wood on the mountain of Bahli-Rashi. It is perhaps also in the neighbourhood of Hermel, and not, as was thought, at the mouth of the Dog River, that it would be advisable to seek the monument of Shalmanazar II executed on this occasion.

One might easily multiply these comparisons borrowed from the Assyrian documents. I will limit myself to mention only one more, the inscription of Assurnatzir-Pal, discovered at Ballawat by M. Rassam, and recently studied with success by Mr. E. A. Budge. One may read at the lines 24-27, "To the land of Lebanon I went; beams of cedar (*erini*), *surman* wood, cypress wood (*dapranî*) I cut down." However that may be, the inscriptions and *basso-relievos* of Nebuchadnezzar are worthy to be put beside the well-known monuments left in Syria by the Assyrian and Babylonian conquerors, as testimonies of their passage through Phœnicia, not far from there, in the valley of the Dog River, north of Beyrout. The discovery of M. Pognon proves that Lebanon has not yet said its last word, and that an accurate exploration of this vast tract of mountains would, perhaps, produce new and still more valuable discoveries of the same kind. We must not forget that there remains to be found, among other things, the great Phœnician sanctuary, where the mountain, itself deified, was adored under the name of Baal-Lebanon. The existence of this topic Baal is attested by the bronze cup dedicated to him by a *soken* of an undetermined city, namesake of the classical Carthage, a personage whom I have formerly demonstrated to have been a high functionary of Hiram, King of the Sidonians.

CH. CLERMONT-GANNEAU.

GENUINE AND FALSE INSCRIPTIONS IN PALESTINE.

(Reprinted from the "Times.")

THE Holy Land, among other privileges, possesses one not much to be envied. Among all the regions of the ancient world it is the one that, until now, is noticeable by the greatest sterility as regards the production of ancient monuments. And yet Palestine, that country so small upon the map but so large in history, occupies so considerable a place in the annals of humanity that it is above all there one would wish to exhume some of those contemporary documents of events, those authentic witnesses of the past, which arise abundantly from the soil of Assyria, Chaldea, Egypt, Greece, and Italy. What would we not give to be able to confront the Bible with such witnesses, and to call forth from the ground of Palestine stones or books that would speak to us of its history during the Jewish period, and would permit us to examine the Biblical narrations with the strictness required in these days by science! In spite of active and repeated researches, of considerable pecuniary sacrifices, it is only within the last twelve or thirteen years that a few happy discoveries have been made which have broken this epigraphical silence of the Holy Land, and encouraged the efforts of future explorers by showing that, if Palestine is sparing of her treasures, she is, nevertheless, not absolutely disinherited in this respect, and that one might reasonably hope to obtain others from her.

The number is unfortunately soon counted of the inscriptions of Palestine, discovered until now, which carry us back to the destruction of Jerusalem by Titus, a decisive moment marking the end of political Judaism. As many as seven may be enumerated. The earliest in date and the most important is the Moabite Stone, which I had the good fortune to get out of the clutches of the Bedouins. This inestimable document, written in Phœnician characters and Moabite language, a dialect closely related to Hebrew, may unquestionably be considered as an original page of the Bible, dated with certainty the ninth century before our era. It gives a detailed account of the political and religious struggles between Moab and Israel, from David to Jehoshaphat, and furnishes us with a singularly instructive counterpart of the narratives of this period, contained in the Second Book of Kings. It further possesses the advantages, perhaps still superior, of giving us the most ancient known specimen of alphabetical letters; of those twenty-two Phœnician characters come to us through the Greeks and Romans—that is to say, the prototype itself of our A. B. C., of that universal instrument used by the greater part of the civilised world to express and fix thought.

The Moabite Stone is a Hebrew document; it is not, properly speaking, an Israelite document. The city of Jerusalem itself has furnished us with as many as four really Israelite inscriptions. They all four present this

peculiarity, that of being engraved in a cartouch or hollow framing on the rock, thus being localised with entire certainty. There are, first, two inscriptions, unfortunately much mutilated, discovered by me in 1870, upon the exterior wall of a cave, hollowed out of the rock, in Selwan, at the very gates of Jerusalem. They are also in archaic characters of Phœnician form, and anterior to the destruction of the kingdom of Judah by the Chaldeans, in 588 B.C. Afterwards comes an extremely curious inscription discovered about three years since by some Arab children who were bathing in the spring of Siloam, at the foot of Jerusalem. It is the narrative, in archaic characters, also engraved on the rock, of the operation accomplished by the Israelitish engineers, who had dug under Mount Moriah a tunnel more than 500 mètres long, and which is still in existence. It is, on a small scale, a work similar to the St. Gothard and Mount Cenis tunnels. Finally, in 1881, I ascertained the existence of a fourth inscription of a similar kind, engraved over the door of a pretty little monolith naos, of Egyptian style, cut in one piece out of the rock. This monument, erected in the midst of the village of Selwan, and which has always attracted the attention of travellers and tourists, without any one having suspected the existence of an inscription, may henceforth be by good rights considered as an authentic specimen of Israelitish architecture of the period of the Kings of Judah.

To these five inscriptions may be added two others—the inscriptions of Gezer and the stela of the Temple of Jerusalem. The inscriptions of Gezer consist of a group of four bilingual epigraphs, Greek and Hebrew, also cut in the rock, in a part of Palestine which I had proved ten years ago to be the site, vainly sought until then, of the Royal Canaanite city of Gezer. Two years after having given this merely theoretical demonstration, which was then not received without objection, I was fortunate enough to discover, on the ground itself, these four inscriptions, which give an un hoped-for confirmation of it, since they contain, at full length, this brief but decisive mention, repeated as many as three times—"limit (*tekum*) of Gezer." The writing is less ancient than that of the preceding inscriptions, and brings us to the epoch of the Maccabees. But it is still a document plainly belonging to the true Judaic history. The stela of the Temple is a monument which, although less ancient than the Moabite Stone, and written in the Greek, and not the Hebrew language, is nevertheless on a par with it as regards historical value. If the Moabite Stone is, in some measure, an original page of the Old Testament, the stela of the Temple is undoubtedly an authentically original page of the New. This stela, which I discovered in 1871, in the foundations of an old Arab edifice, close to the Mosque of Omar, contains in reality the text itself of the famous law forbidding, under pain of death, to the Gentiles, the entrance of the sacred precincts of the Temple, reconstructed by Herod. It is, by virtue of this law, invoked by the enraged Jews, that the Apostle Paul, after having with great difficulty escaped tumultuary execution, was dragged before the Roman tribunal.

There are, therefore, as I have said, in all, seven inscriptions only, belonging with certitude to the old historical past of Palestine. By a piece

of good luck, six of these have fallen to my share. I do not take into account the Israelite seals, now tolerably numerous, of which I recently published some fine specimens,¹ neither the stamped handles of amphoræ, discovered in 1869 by Colonel Warren, R.E. These little intaglios and these fragments of pottery, which constitute, so to speak, the small change of ancient Israelitish epigraphy, are, in fact, by their nature, of too uncertain origin. I also exclude the Jewish ossuaries with Hebraic inscriptions, also the epitaphs in the Necropolis of Joppa, and of a few sepulchres in Palestine, of which I have collected and published a sufficiently large number. Their antiquity, according to my idea, has been exaggerated, and if some of these small epigraphs, otherwise without historical interest, can strictly be traced back to the commencement of the Christian era, the greater part of them are, in my opinion, subsequent to Titus.

Perhaps, strictly, one might add another (eighth) number to this too short list—the sarcophagus discovered by M. de Sauley in the Q'bour el Molouk, and bearing a double epitaph in Aramæan and in Hebrew—"The Queen Saddam or Sadda." It is quite impossible to accept for an instant the conjecture of M. de Sauley, who thought to have found therein the very body of a queen of the old kingdom of Judah. I think I am able to show that this Queen Saddam, quite unknown historically, is none other than the Queen Helena of Adiabene herself. This illustrious Jewish proselyte must have had, according to the fashion of those times, a double name—one Greek, Helena, the other, Semitic, and national, Saddam. This monument is, therefore, only indirectly connected with Jewish archæology. It is probably to remedy this dearth of ancient monuments that there were established at Jerusalem several years ago certain manufactories for the fabrication of antiquities at prices sometimes moderate, sometimes fairly remunerative, not only for the benefit of tourists, but also of *savants*, which is more serious.

First, there are the spurious antique coins. That is a trifling matter, and *Messieurs les faussaires* are here almost in their right, the more so as their industry is not fraught with danger to the real connoisseur. There are fabricated readily at Jerusalem apocryphal silver shekels for the delectation of tourists greedy after antiquities, who would return home disconsolate if they did not take back from their pilgrimage to the Holy Land as a precious souvenir some counterfeit specimen of the coins of the Maccabees. The forgers are not always satisfied with imitating more or less cleverly from real models. They sometimes invent. Some years ago there were to be found in the bazaars at Jerusalem bronze coins of Moses, which met with great success. They represented on one side the head of the Hebrew law-giver, adorned with magnificent ram's horns; on the other, Hebraic legends taken from Mosaic books. The legends were, it is true, in square—that is to say, modern characters, but the amateurs did not look into things so closely.

¹ "Sceaux et Cachets Israélites, Phéniciens et Syriens, suivis d'Epigraphes Phéniciennes inédites." Paris: E. Leroux, 1883. (With two plates.)

Generally this gang of Syrian forgers have no great imagination. They are not properly inventors ; they are rather dull imitators. Their productions are generally connected more or less ingeniously, either by the external or internal conditions, either by the circumstances of time and place with some important archæological discovery. If by chance some authentic and antique object is discovered, they at once set to work and reproduce it for better or for worse, often for worse, or imitate it servilely. Here is a curious and hitherto unmentioned example, taken from another ground than that of Palestine, but contiguous to it. I received some years ago from M. Mordtmann, of Constantinople, a small figurine in terra-cotta, very prettily modelled, and still retaining traces of ancient gilding. It represents a winged bull half kneeling. The figurine is hollow and shaped in the form of an antique lamp. In the middle of the back is a large hole intended to receive the oil ; on the top of the head a smaller hole is disposed to allow the wick to pass, and the flame to shine between the two horns. The curved tail of the animal serves as a handle to hold the lamp. This little idol, apparently a reminiscence of the Golden Calf, bears on the left and on the right hip a double Phœnician inscription, engraved in the clay before the baking. The whole thing has really not a bad appearance. The Phœnician inscription begins on the right and continues on the left hip ; it can be easily read—"Yehaumelek, son of Yirpel." The figure is a perfect forgery. I can prove it easily. The modern modeller has merely copied the name of Yehaumelek, King of Byblos, whose stela, found at Yebail, and recently published by M. de Vogüé, had made some noise in Syria. Upon the original stela, slightly defaced in this place, the name of the father, or rather the grandfather, is very difficult to decipher. The forger, puzzled, as have been the *savants* themselves, has read and transcribed it fancifully, being perhaps influenced by the existence of the Biblical name of locality Yirpal (Josh. xviii, 27). I have never been able to ascertain exactly the studio whence this little monument was issued, the execution of which betrays a far cleverer hand than that which formed the Moabite potteries.

The forgers execute inscriptions readily, and that can be understood ; for an inscription is a *rara avis* in Palestine, and consequently much sought after. The discovery of the Moabite Stone and that of the stela of the Temple have given new scope for the activity of the forgers, over-excited by the powerful stimulant of cupidity. It may be said that in this respect the Moabite Stone, which gave birth to the false Moabite potteries of Berlin, thousands in number, has been a true *Mère Gigogne*. The Moabite, as they are called in Germany, are, in fact, its direct offspring. It was destined at an interval of ten years to serve as a basis for a fraud of at least equal importance—that of the Biblical manuscript of Mr. Shapira. The first of these frauds was successful ; the second was luckily a failure, after having, nevertheless, been too far on the road to success.

To those who might be inclined to think that it is taking a great deal of trouble, and conferring much honour on those archæological frauds to

unmask and judge them publicly, that it is making much ado about nothing, that it would suffice to condemn and to execute them with closed doors among *savants*, I can only reply by quoting the words of a judge whose authority no one can question :—

“The precautions against spurious Oriental monuments have been superfluous until of late years ; in future they will become necessary, and add to the difficulty of studies already so full of impediments.”¹

“The forgers threaten soon to cause so many obstacles to the study of epigraphy and Oriental archæology, that we must place among the most signal services that of unmasking these kinds of fabrications.”²

These words were pronounced by the illustrious and uncontested chief of Semitic studies shortly after my having succeeded, not without trouble, in putting an end to the mystification of the Moabite potteries of Berlin. “It was fortunate,” added M. Renan, “that this regrettable error was overthrown by evidence, so to say, material. . . . With the same stroke M. Clermont-Ganneau has anticipated more than one mystification for the future.” It is a fact that the forgers, slightly discomfited after the heavy blow they had received, had kept quiet during ten years. With time they gained fresh courage, and organised the colossal fraud of the Shapira manuscript. Again unmasked, it is probable that they will leave us in peace for some years. But that kind of people are never disheartened. After a while, when their misdeeds are consigned to oblivion, they will set to work anew, and we must not despair of seeing, some day, spring from their inexhaustible manufactories the mended pieces of the Tables of the Law, broken on Mount Sinai, or the Blue Book from the Foreign Office of Mount Sion, the diplomatic correspondence of Solomon with King Hiram, and his private amatory epistles to the Queen of Sheba.

The affairs of the Moabite crockery and that of the Shapira manuscript are now too well known to be again discussed here ; they belong henceforth to history. I wish to speak of other less known forgeries, which I have met with during my explorations in Palestine. Although of minor consequence, they are, however, deserving of notice, if only to throw a full light upon the manœuvres of the “*bande noire*,” which has taken the Holy Land as the scene of its exploits. I intend, moreover to publish shortly a book³ containing a detailed study of the whole of the Palestinian forgeries, great and small.

In the month of May, 1871, I discovered at Jerusalem the stela of the Temple, of which I have previously spoken. I exerted myself to the utmost to obtain the original ; in spite of considerable sacrifices, unfortunately, I failed, in consequence of the obstinacy of the Mussulman possessors of the house under whose foundations the stela was built up. I was obliged, just at that time, to leave Jerusalem, having been summoned to our Embassy at Constantinople. The negotiations were, therefore,

¹ E. Renan. “Rapport Annuel,” *Journal Asiatique*, Juillet, 1876, p. 37.

² E. Renan. “Rapport Annuel,” *Journal Asiatique*, Juillet, 1874, p. 30.

³ “*Les Fraudes Archéologiques en Palestine*,” with engravings. Paris : E. Leroux, 28, Rue Bonaparte.

forcibly broken off. The rumour had, meanwhile, reached the ears of the Turkish governor. He was convinced, from the interest taken by me in the matter, that this discovery must be a great treasure. The very day of my departure, he gave orders to remove the stela, without more ado, and to deposit it in the Seraï. It was to be forwarded to Constantinople. In fact, after having lain a few months in the Seraï, it was despatched *viâ* Jaffa, but it never reached its destination. It is now some twelve years since this event, and the stone is still looked for at Constantinople. It must have been sold for a good price to some European, and I have no doubt that it will one day reappear from its hiding-place, after a lapse of time sufficient for the prescription, in some great public collection. What I am certain of is that substantial offers were, after my departure, made to the governor by the representatives of certain foreign Powers at Jerusalem, and I have it from a reliable auricular witness, that the governor had asked one of them the sum of £2,000 sterling. A little later, he would have been satisfied with 1,500 Turkish pounds. I also know that his secretary had written to a well-known Parisian Israelitish financier, proposing to him the acquisition of this unique monument of Jewish history. But this appeal to the national feelings fell on deaf ears, and the governor was obliged to go elsewhere. The fact is, that the stela of the Temple has disappeared from the horizon, and that no one knows, or is willing to tell, what has become of it.

As for me, I had given up all hope, when, scarcely arrived at Constantinople, I received from a friend of mine at Jerusalem, an unexpected piece of news. A Christian Arab, of the Holy City, named Martin Boulos, whom I had employed in the unsuccessful negotiations for obtaining the monument, called upon him on the 30th of September. He brought him the rough copy of Greek letters, engraved, he said, on a stone, quite similar to the other, and built up, like it, in the wall of an Arab house. He undertook to take it away, and to deliver it up to me for a good round sum. The thing was not, *à priori*, as unlikely as might be thought, for we know from authentic sources, from Flavius Josephus, that there were several stelæ identical with that discovered by me, not only in Greek, but also in Latin, erected at intervals along the sacred precincts surrounding the area of the Temple. This might, therefore, possibly be a second stela that Martin Boulos had picked up. Nevertheless, the almost simultaneous discovery of these twin sisters was, it must be confessed, a most astonishing coincidence. Moreover, I knew that Martin Boulos was, by profession, a stone-worker, that he had often engraved epitaphs upon tombstones for the cemetery in Jerusalem, added to which I knew from experience his unscrupulousness, and I had the firm conviction that he had betrayed me in the very transaction in which I had employed him as an agent.

I immediately suspected a fraud, coupled with an attempt to swindle me. I lost no time in writing to my friend, to put him on his guard, at the same time urging him to let the fellow entangle himself to the utmost. He appeared again; after the copy he brought the squeeze of the stone. Then a comedy began, which lasted no less than three months before

arriving at the anticipated catastrophe, and amusing details of which are not wanting. I received regular information from my friend. First, there were all kinds of difficulties made to show the pretended original, which happened to be in a house adjacent to that where I had discovered the stela. They feared to rouse once more the attention of the governor. The landlord was afraid, and he and his Mussulman confederates made incessant demands for money, to indemnify the one or purchase the silence of the other, &c. On the 24th of November, my friend at last succeeded in being taken to the place where lay the treasure. He was conducted to it most cautiously, at 5 o'clock in the morning, to a little dark stable, where a donkey was stalled. The ass began to bray, and threatened to denounce to the neighbours the presence of visitors who walked stealthily. Feigned terror of the bystanders. The unlucky animal was silenced by having its tail pulled, an infallible recipe, it appears, for closing the mouths of loquacious donkeys. The alarm over, my friend was shown the famous stone, fitted into a recess in one of the walls of the stable, and partly loosened. It was placed in exactly the same position as the other—that is to say, the line descending vertically.

Some days after this little got-up play, which seemed to have produced the desired effect, Martin Boulos, thinking the affair ripe, succeeded in taking away the stone, and took it in triumph to my friend. It was then that an unexpected thunderclap occurred. My friend told him plainly that the stone was a mere forgery. Martin Boulos was forced to confess his guilt, and went away, leaving his pretended stela in the hands of him he would have cheated, only too glad to have got off so cheaply.

When I returned to Jerusalem in 1873, I found the stela of Martin Boulos deposited in the Franciscan Convent of St. Sauveur. I took a photograph of it as a curiosity. The false stela has much the same dimensions as the original, only the impostor has chosen, as less difficult to work, a softer limestone. The inscription is copied line for line and letter for letter. But the modern engraver has committed numerous errors, either in confusing one letter with another, or in joining together separate characters, or in leaving blank spaces in the parts too much defaced to be deciphered by him.

The false stela of the Temple was not long without its pendant. I find in my note-book the following lines, written before my departure for Constantinople, proving that Martin Boulos was already busy preparing his forgeries: "Martin had found in the village a stone with inscription, half buried; only two lines were visible above ground." I left Jerusalem without having had the leisure to verify this statement, which, at this time, I had no reason to suspect. It was, in fact, a false monument, as I afterwards acquired the material proof.

The reason which determined the impostor to localise it at Selwan was that I had discovered some months before at this place, and had cut from the rock, the two archaic Hebrew inscriptions before mentioned. This tit-bit was apparently reserved for me. My sudden departure baffled Martin Boulos, who sought other dupes.

It appears from a letter addressed to me by Brother Lievin, on the 25th of February, 1872, that the pretended inscription was introduced into the Jerusalem market about this time. Negotiations were entered into on the matter with M. Mourad Hilperu and Mr. Shapira, antiquity dealers in the Holy City. The latter had had, at least, a squeeze of the inscription in his hands. I do not know whether it is through the medium of one of these persons that it was sold or re-sold to its final purchaser. At any rate, a very learned and honest man living in Jerusalem was taken in and induced to buy the stone. When I returned to the Holy Land in 1874 I had occasion to examine the monument itself, and I took a photograph of it. It was not without trouble that I succeeded in undeceiving its possessor, who firmly believed in the authenticity of the inscription. It is a very hard block of limestone. The inscription is composed of eight lines of Greek characters, not deeply engraved, out of which it is impossible to make any sense. Scarcely can here and there be recognised a few incoherent and barbarously spelt words. It is probably this puzzling feature which raised the curiosity of the buyer, and made him fall into the trap. He is a clever Greek scholar, and it is certain that put before a translatable inscription, such as the clumsy reproduction of the stela of the Temple, he would have recognised the imposture at first sight.

The forger had this time very cunningly placed himself on the footing of untranslatableness. These tactics have been employed with full success in the fabrication of the Moabite crockery, whose purely fantastical epigraphs have deluded the most learned interpreters of Germany, and have, just on that account, determined their conviction. The characters of the false Greek inscription of Selwan visibly proceed, moreover, as regards shape, from those of the stela of the Temple. Although the forger has carefully refrained from reproducing the same words, he has unconsciously fallen again into certain combinations of letters, betraying the model placed before his eyes. At the same time Brother Lievin sent me the squeeze, or the copies of a series of pretended ancient monuments, recently discovered, and stored in the shop or the back shop of M. Mourad Hilperu and of Mr. Shapira. I immediately perceived that they were apocryphal, and I hastened to put my friend on his guard against this attempt, where I easily discerned the working of a bold and enterprising band of forgers, whose leaders were personally known to me.

It was, first, the reproduction, pretty well executed, on stone, of a Nabathean inscription from Oumm-er-resâs, of which I possessed, since 1869, a squeeze. This squeeze, offered by me to the Commission of the Corpus Inscriptionum, Semiticarum, through the medium of M. de Vogüé, has been the object of a learned study by this latter and by M. Renan. I at once recognised my old acquaintance. Afterwards came the copy, in pencil, of a second inscription, not less fantastic than the first. It is the one which Mr. Koch, in his work¹ on the Moabite pottery, represented on his Plate IV, No. 2. The eager champion of the authenticity of the

¹ "Moabitisch oder Selimisch." Stuttgart, 1876.

Moabite crockery has not seen that this inscription is another reproduction, extremely disfigured, of the inscription of Oumm-er-resâs ! It is sufficient to reverse his drawing, which he has placed upside down, and to compare it letter for letter with the said inscription, for the thing to become immediately obvious, although the characters are interpreted in the most artless manner, and several of them have been omitted.

Next appeared a grotesque head of a statue in limestone, ornamented on the neck and on the skull with unlikely Moabite inscriptions. In 1874 I took a photograph of this head, which, it was asserted, had been dug up at Jerusalem itself, and was estimated by its possessor at £20 sterling. It presents a curious particularity in its coarseness. The features recall in a striking manner those of Martin Boulos himself. This unconscious imitation is a well-known occurrence in the primitive arts, where the artist reproduces, so as to speak, unconsciously, his individual or ethnical type. Again, there was produced an illegible inscription, engraved on a fragment of a porphyry column, an inscription of Medeba, containing it was asserted the account of a victory gained over the Moabites by the Israelites, under the command of Moses.

J'en passe et des meilleurs. I will, however, make an exception for the following case :—In a letter, dated October 28, 1871, Brother Lievin sent me, from Jerusalem to Constantinople, the copy, in pencil, of an inscription which had been forwarded to him by Martin Boulos. The latter pretended to have obtained this copy from a Bedouin. The original existed, according to him, in a locality situated beyond Jordan. Shortly afterwards I received a squeeze. The inscription is composed of four lines of Phœnician characters, clumsily imitated from those of the Moabite Stone, and pleasantly intermingled with Greek letters. Underneath are three lines of cuneiform characters. The presence of the cuneiform on this new specimen of forgery was in no way surprising to me, for I had obtained, at Jerusalem, some months before, the copy, made by an Arab, of a brick with a cuneiform inscription of respectable appearance. This brick, which I have every reason to believe authentic, had fallen, I know not by what chance, into the hands of the Bedouins beyond Jordan. I had, nevertheless, not succeeded in seeing the original. In any case, it was this brick that had partly served Martin Boulos as a model for the fabrication of his bilingual text. It is needless to add that this fresh attempt was not more successful than the preceding ones, and that the Moabitico-cuneiform inscription remained on his hands.

At the end of 1873, or at the beginning of 1874, during the mission confided to me by the Palestine Exploration Fund, I picked up a curious specimen of the industry of these Jerusalemite forgers. A certain Mr. Albengo accosted me one day in one of the streets of the Holy City, and taking me aside, offered me for sale a little intaglio, a red carnelian, if I recollect rightly, in the form of a truncated cone. On the widest side was engraved an inscription of four lines in Hebrew archaic characters of rather strange aspect, copied somewhat coarsely from those of the Moabite Stone. The inscription was reversed like those of the ancient Phœnician seals

intended to reproduce by impression the letters in a right sense. It could be read without difficulty, in spite of the intentional or accidental anomalies of several letters:—"The servant of Jehovah, David, King." The very own seal of King David! and that for the modest sum of ten francs! It was really given away. It is unnecessary to say that I did not avail myself of this tempting offer. I contented myself with taking an impression and a sketch of the object, of whose future fate I am quite ignorant. Perhaps it will reappear one day in the collection of some less sceptical amateur.

I now come to another series of forgeries. In 1874 I purchased from an Arab mason, as a curiosity, an inscription on limestone, alleged to have been found in the Wadi-Qaddoum, one of the little valleys on the slopes of the Mount of Olives. The inscription, glaringly false, is a hybrid mixture of square Hebrew and of Himyaritic or Sabaean characters. One must not be surprised beyond measure at this borrowing from the Himyaritic alphabet. The forgers had had at their disposal as early as 1870 authentic samples of it. For a certain Jew, named Aron Aorcias, had brought from Yemen a few Himyaritic monuments, among others a very beautiful stela with inscription and figures, which I have published formerly in the *Journal Asiatique*. This last circumstance may also help to explain the presence of letters belonging to the same alphabet of South Arabia in some of the inscriptions on the false Moabite pottery.

On the 4th October, 1874, some Arabs from Jerusalem, of whose names I am ignorant, brought me very mysteriously the cast of a pretended antique inscription. This cast was curiously enough moulded in dough. I feigned to be taken in, and I told them to show me the original, which they asserted to have taken away from I do not know where. The next night they came to my house most cautiously, like conspirators, and solemnly produced a white marble slab. Upon it was engraved, on a gigantic scale, a servile imitation of a Jewish shekel of the year 1, with its well-known Hebraic legend in archaic characters, "Shekel of Israel." Nothing was wanting, not even the vase called Manna vase, figuring always on the obverse of this type of shekel, in the centre of the circular legend. The letters are not too badly imitated. The shape of the slab seems to indicate that it had previously served as a casing wedge in an Arab arch. The stone smelt strongly of petroleum. I offered half-a-sovereign for it. This paltry sum was rejected with scorn, and the indignant fellows retired with their unappreciated *chef d'œuvre* to seek some more credulous amateur.

Why the forgers had fixed their choice upon this model of a shekel is easy to guess. Just about this time a great many silver shekels had been found in Palestine, piled up in a vase sealed with lead. These shekels had been brought to Jerusalem, and I had acquired a good number of them. It will be seen that the principle is always the same, the forgers take as a basis of operation authentic antiquities to which their attention is attracted by a recent discovery.

In 1874 I published a handsome crowned and bearded head of a statue,

picked up close to the sepulchres of the Kings at Jerusalem by some Arab workmen who were collecting stones for a building. I suggested to identify it with the head of the Emperor Hadrian, whose statue formerly figured in the Temple on the very site of the Holy of Holies. This information did not fall upon deaf ears, and the forgers lost no time in setting to work on this new *datum*.

Some time after they brought to a European residing at Jerusalem a head of a statue of hurried workmanship, in soft white limestone, that had been carefully blackened, pretending to look like basalt. The following inscription was engraved round the head :—

AVSVITVSHASPIANVS

It is easy to reconstitute the intended words, oddly mutilated—

AVGVSTVS HADRIANVS

I little expected, I must confess, this astonishing epigraphic confirmation of my conjectures. The author of this beautiful masterpiece was again the aforesaid indefatigable Martin Boulos.

In October, 1881, a large massive silver ring was offered to the Russian Archimandrite of Jerusalem. It measured 4 centimètres in diameter, and had a circular bezel of the same metal, upon which was engraved in a round, an inscription of a star with six rays, formed by two intersected triangles. On the centre of the bezel was represented a sort of vase on a foot, a cup or lamp, or rather a censer, suspended by a triple chain, and recalling singularly the censer that exists upon certain mediæval monuments of Palestine. The object, at least so it was asserted, had been found at Siloé. It was not without reason that this origin was attributed to it. Attention had just been drawn to this locality by the discovery of the well-known Hebrew archaic inscription of the aqueduct of Siloé. The ring had been secretly brought to the Archimandrite, and its immediate acquisition was urged, otherwise it was threatened to be offered elsewhere. The antiquity makers and vendors who are working in Jerusalem, are perfectly well acquainted with the rivalry existing between the Europeans living in this city on the subject of antiquities, and they know how to turn it to good account if occasion requires.

I was then Vice-Consul at Jaffa. The Archimandrite at once sent me impressions and a good drawing, requesting me to give him my opinion by telegraph. I had no trouble in convincing him that he had to deal with a shameless impostor, and the possessor was begged to take his merchandise elsewhere. The inscription, of whose apocryphalness there could be no possible doubt, seemed to me rather difficult to decipher. The characters appeared to have been partly borrowed from the alphabet of the Moabite Stone, and partly from that of the ancient shekels, or Jewish coins, of the period of the Maccabees. It began by the word “izk,” seal—a word rare and even unknown, under this Hebrew form. It was visibly borrowed from the Chaldean text of Daniel (Dan. vi, 18), where it is said that Darius sealed with his seal the lion’s den, into which the prophet had been thrown. Afterwards came, as it seemed, the name of Jairus. The remainder was hardly intelligible. I only recognised with certainty the word “Kahal,”

assembly. But such frauds are really not worth the trouble of seriously disputing the meaning intended by their often most ignorant authors. I shall merely point out that the maker of this pretended old Hebrew silver seal seems to have taken his first idea from the mediæval seals and bulls of the order of the Knights of St. John, of which he must have had some specimens at hand. The incenser engraved in the centre, the circular disposal of the legend, the star substituted for the cross, which, on the mediæval bulls, marks the beginning and the end of the inscription, are so many characteristics betraying the servile imitation of the model.

Among the few antiquities existing in the Greek convent of the Holy Cross, near Jerusalem, I noticed a Jewish ossuary, in every respect similar to those, tolerably numerous, collected by me in Palestine. It was a small box of soft limestone, on four feet. The front was ornamented, as usual, with roses, traced with a compass. The ossuary, perfectly authentic, came, it was said, from Mâlha, a short distance from Jerusalem. Upon the ornamental front was engraved, in two long lines, partly on the edge, partly on the side itself, a splendid Moabite inscription, perfectly false. I greatly astonished the possessors of the monument by revealing to them the fraud, which they did not in the least suspect. This time the system is different ; we no longer have to deal, properly speaking, with a forgery, but with a falsification. I have taken a photograph of this Moabitisied ossuary.

These few examples will suffice, I think, to show us under new aspects the activity of the Palestinian forgers, to whom we owe the production of the Moabite potteries, and of the Shapira manuscript. They prove to us that these two memorable mystifications are far from having been sole attempts ; but that they form part and parcel of a series of systematic facts, which have preceded, accompanied, and followed them. The forgers, I repeat, have not said their last word. We may expect to see them renew the attack. The public is to-day amply edified, and we hope will receive them as they deserve. Such is the principal aim of this article, which is, so to speak, the epilogue of the history of the Shapira manuscript.

CH. CLERMONT-GANNEAU.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

The Geological Expedition has been, with the exception of one detail, the section across North Palestine, successfully accomplished. Professor Hull returned to London on February 12th, bringing with him the materials for constructing a geological map of the Holy Land very much in advance of anything which could hitherto be attempted. He is now engaged in drawing up a detailed report, which will not, however, be ready for some time yet. Meanwhile, however, we shall be able to publish a popular account of his journey, the first instalment of which appears in this number of the *Quarterly Statement*.

The leading features of his report may be briefly stated as follows :—Professor Hull has traced the ancient margin of the Gulfs of Suez and Akabah to the height of 200 feet above their present level, so that the whole country has been submerged to that extent, and has been gradually rising. As one most interesting result of this rise, the Professor is of opinion that at the time of the Exodus there may have been a continuous connection of the Mediterranean and the Red Sea. If his fact is established, it will place all the questions connected with the narrative on an entirely new footing. As regards the Dead Sea, he has discovered that it formerly stood at an elevation of 1,400 feet above its present level; that is to say, 150 feet above the level of the Mediterranean. The history of this gradually lowering of the waters will form a special feature in Professor Hull's forthcoming report. He has also found evidences of a chain of ancient lakes in the Sinaitic district, and of another chain in the centre of the Wâdy Arabah, not far from the watershed. The great line of feature of the Wâdy Arabah and the Jordan Valley has been traced to a distance of more than a hundred miles. The materials for working out a complete theory of the origin of this remarkable depression are now available. They are found to differ in many details from the one furnished by Lartet. The terraces of the Jordan have been examined, the most important one being 600 feet above the present surface of the Dead Sea. The relation of the terraces to the surrounding hills and valleys shows that these features had already been formed before the waters had reached their former level. Sections have been carried east and west across the Arabah and the Jordan Valley. Two traverses of Palestine have also been made from the Mediterranean to the Jordan.

Meantime, Dr. Gordon Hull has taken more than a hundred photographs, chiefly of places never before figured. These are now being printed, and a list of them will be ready for the next *Quarterly Statement*. As regards Mr. Henry Hart and Mr. Reginald Lawrence, the two "volunteers," the former has made

valuable botanical and other collections, which, however, were not made for the Committee, who allowed these gentlemen to join Professor Hull on the condition of their paying their own expenses, and have therefore no claim upon them for their discoveries.

On the arrival of the party at Gaza, as will be seen by the letters of Professor Hull, Captain Kitchener left them and returned to Egypt alone, and by a new route. Mr. Armstrong went on with Professor Hull as far as Jerusalem, where he remained for some weeks working up the map from the observations, plans, and sketches taken by Captain Kitchener and himself in the Wâdy Arabah. This done, he proceeded to Cairo and received from Captain Kitchener his reports—(1) on the topographical work of the Expedition; (2) of his own ride across the Desert from Gaza to Ismailiyeh, and the map of the route. He arrived in England on Wednesday, March 12th.

It is too late to publish the maps and reports with this number of the *Quarterly Statement*. It will, however, be interesting to select one or two of the most striking points. Captain Kitchener received from an Arab a version of the story of Palmer's murder, which may or may not be true, but which differs materially from the accounts already published; he found the natives profoundly impressed by the vigour with which Sir Charles Warren hunted down the murderers, of whom the most guilty is still, however, at large; he visited the Temple at Sabul el Khadeim; he has advanced a new theory as to the origin and purposes of the *nawamis* concerning which Palmer's "Desert of the Exodus" gives a good account. On the way from Akabah to the Dead Sea he found traces of an old city, about a mile north-east of the Bay of Akabah; he made a triangulation of the whole valley, and in his report describes the conformation of the ground; he visited Petra with the rest of the party; he describes the distribution of the tribes over the ancient Edom, and he corrects and fixes the shape and positions of the southern shores of the Dead Sea.

One passage may be quoted at length:—

"Mr. Armstrong explored the country towards the east, and found, six miles north of Feidan, the ruins of a small town in a valley surrounded by bold and precipitous cliffs. The ruined walls are from a foot to 3 feet high; the stones are roughly squared, and of no great size; there are some black heaps which resemble clay heaps, and show that very probably ancient mines may be found in the neighbourhood." No name could be obtained from this ruin; indeed the difficulty of getting names at all in the Wâdy Arabah is very great, because there are no natives to ask them of. Other remains and indications of former buildings were observed on the eastern side; as in the Sinai peninsula, there were formerly terraces on the valley slopes irrigated by the streams which now run to waste. Also, Captain Kitchener heard many stories and reports concerning the ruins which lie east of the hills of which Petra is one. It must be remembered that Laborde is the only traveller who has yet been in this district. His ride through it was too hasty to allow of exploration, yet Captain Kitchener speaks highly of the accuracy of his plan of Petra.

Another interesting find was made by Mr. Hart, in his botanical rambles, at a place called Khurbet Lubrush. "These remains consist of a large number of *nawamis*; some of which are in a wonderfully perfect state of preservation. They are dotted about thickly over the site, without any plan, and the openings in them having no special direction. A few loose stone walls near some of them have the appearance of having been thrown up recently round tents. Enclosing the greater number of these *nawamis* is an ancient wall, following the contour of the hill for a quarter of a mile; only the foundations now remain, but they were of massive undressed masonry of apparently very remote antiquity. Inside the wall there are the ruins of an oblong building of similar masonry, very probably an ancient temple. Unfortunately, the remains are so ruined that it is impossible, without considerable labour, to thoroughly explore or measure the monument. Only one corner could be determined, the remainder being covered by heaps of massive stone blocks."

The cost of the Expedition has been about £2,000. The publication of the results must, however, be added. A large part of the bill remains to be paid. The subscribers of the Society will perhaps make a note of this fact.

The small piece of the Survey of Eastern Palestine, consisting of 550 square miles, has been reduced and engraved on the same scale as the modern Map of Western Palestine. Subscribers to the Society who wish to have it in order to add it to their map, can do so by application to the Secretary, post free, for eighteenpence.

The two volumes to complete the "Survey of Western Palestine" are very nearly ready. As soon as the work is completed, the Committee will take steps to have the few copies which remain subscribed. They would greatly prefer to see them in public libraries, where their contents would be generally accessible, and would therefore be much obliged if their friends would place them in correspondence with librarians in any part of the world.

The only authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem.

- (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

BALANCE SHEET.

1883.				1883.			
Jan. 1.	Balance ..	..	£ s d.	Dec. 31.	Exploration ..	..	£ s d.
Dec. 31.	Subscriptions ..	..	363 14 3	"	Maps and Memoirs ..	..	732 2 3
"	Maps and Memoirs ..	..	2,014 1 1	"	Management :	..	1,521 5 2
"	Books ..	..	881 7 0	"	Salaries and wages ..	..	374 7 3
"	Photographs ..	..	100 11 0	"	Rent ..	..	121 0 0
			22 3 7	"	Stationery, Advertising, Lithography, Insurance, and Office ..	..	83 18 2
				"	Printing ..	..	263 2 2
				"	Postage ..	..	113 16 3
				"	Balance ..	..	172 5 8
							<hr/>
							£3,381 16 11
							<hr/>

The liabilities of the Society on January 1st were as follows:—

			£	s.	d.
1. Office and Printing account	..	..	652	17	9
2. Memoirs	..	..	500	0	0
3. Maps	..	..	750	0	0
4. Exploration	..	..	1,500	0	0

As regards the second account, it includes part, but not all, of the books, engravings, lithographs, &c., now being prepared. This amount is already reduced by £388. Up to the present moment the amount spent on "Maps and Memoirs" is more than equalled by the receipts, so that, although we do not expect the small maps to pay the expense of production, which was very heavy, the general fund will not bear any part of that expense. The third account has now been reduced by £300, and the fourth by £885.

The assets of the Society are—(1) a balance in hand on March 20th of £816; (2) the amount due for the "Survey of Western Palestine," about £1,000, which will be called in on the completion of the work in April; (3) the copies of the "Survey" still unsubscribed for, which will then be offered to libraries and the public; (4) copyrights of books, photographs, collections, &c. The subscribers will understand that the liabilities on the Maps and Memoirs have nothing to do with the general fund.

The printing account is large, but this will be greatly reduced during the present quarter.

Speaking roughly, without special effort the Committee can reckon on a body of subscribers whose guineas and half guineas amount to about £2,000 a year: their management expenses are very nearly a fixed quantity, viz., about £600 a year. The printing of the *Quarterly Statement*, given to subscribers, requires about £400, while the postage of the Journal comes to about £70 a year.

The following is the classified division of the year's expenditure:—

Exploration	..	..	22·78	per cent.
Maps and Memoirs	..	..	47·43	"
Management	..	..	18·04	"
Printing	..	..	8·19	"
Postage	..	..	3·56	"
			100·00	

March 20th, 1884.

WALTER MORRISON,
Hon. Treasurer.

The income of the Society, from December 12th to March 21st inclusive, amounted in all, including subscriptions, lectures, and payment for maps, memoirs, and publications, to £2,612 8s. 10d. On March 21st the balance in the Banks was £816.

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

THE PALESTINE PILGRIMS' TEXT SOCIETY.

Enclosed with this number of the *Quarterly Statement* will be found a prospectus of the objects of the Palestine Pilgrims' Text Society, newly established under the Directorate of Sir Charles Wilson. The Society proposes to issue, as funds permit :—

- (1) The whole series of early pilgrims' travels in the Holy Land, translated and annotated.
- (2) The passages from the early Fathers which relate to the topography and geography of the Holy Land.
- (3) Those passages from the Talmud which bear upon these questions.
- (4) The early Arabic and Persian descriptions of the country in translation.
- (5) Such portions of Procopius and the Byzantine historians which are concerned with Palestine.

As regards the first of these objects, the Council of the Society will be able to make use of the labours of the late Dr. Titus Tobler, in his collection of texts, published first in Germany, and next, with the collaboration of M. Aug. Molinier, in the Geographical series of the *Société de l'Orient Latin*, a society whose excellent work is too little known in this country. An account of its publications, by Miss L. Toulmin Smith, appeared in the *Academy* of February 16th, 1884. The texts published by Tobler, and by the French Society, are not translated, and it is felt that in order to make them generally useful in this country they must be published in English. Each pilgrim's narrative will be issued with separate introduction and notes, and a map showing his route in Syria. The early Fathers, the Byzantine historians, and the Persian and Arabic historians, have never been translated, or even consulted for their topography; while as for the Talmud, it would be difficult to find a dozen scholars in this country who have even read it. The Society is entirely separate from the Palestine Exploration Fund, but the Committee have granted the use of their Offices, and the Secretary of the Fund is the Honorary Secretary of the Society.

PROFESSOR HULL'S LETTERS.

I.

November 10th, 1883.

This will be my last letter to you for some time. We are just about to drop down the Gulf of Suez in a sail-boat, and then to land opposite "Moses' Wells," where we camp to-night and to-morrow (Sunday).

Our camels arrived here safely on Friday, and are by this time probably in camp at the Wells. We are now all here, some of our party having arrived yesterday, my son and I the day previous, so as to see to everything connected with our journey, and any objects of interest in the geology of the neighbourhood.

As the grand escarpment of Jebel Attâkah presented so fine an appearance from the roof of our hotel yesterday morning, we determined to visit it; so we dropped down the bay and crossed over to the pier constructed by M. de Lesseps for bringing stone over here for the piers and harbour of the Ship Canal.

The rock is limestone, exceedingly rich in fossils, of which we carried away some, and with part of our baggage are sending them on to Jerusalem to await our arrival there.

Our Arab boatmen proved right pleasant and hard-working fellows, and when the wind fell, took to their oars with a will, chanting a monotonous, but not disagreeable, refrain all the while.

The Duke of Connaught has just passed through and embarked on board the "Shannon," which has been lying in the harbour for some twenty-four hours awaiting his arrival. A salute of eighteen guns was fired from the fort in his honour this morning.

I think we are fortunate in our conductor, Barnard Heilpern. He is most obliging, and seems to manage affairs well. We have also secured the services of the celebrated cook, Ibn Miriam. We are all well, through God's goodness, and in good spirits, anticipating life in the desert; to-night will be our first under a tent.

Kindly address to the care of Consul Moore, at Jerusalem.

II.*December 2nd, 1883.*

I think my last letter was dated from Suez, and I am now able to announce our safe arrival at Akabah on the 27th ult., after a very interesting but somewhat laborious journey across the Sinaitic peninsula. We had every

reason to be satisfied with the conduct of our Towârah Bedouins, who have accompanied us thus far and returned to their homes in Wâdy Feiran yesterday. We spent three days in the neighbourhood of Jebel Musa, and made the ascent of that mount, from the top of which Kitchener took angles to several prominent points, while on the same day Hart ascended Mount Catharina, a feat hitherto unperformed in one day, and was rewarded by finding several plants which are representative of colder climes. From Jebel Musa to this place we have taken the upper or northern route partially explored by the late Professor Palmer, and at an earlier period by Laborde, as recommended in the instructions of the Committee; this has enabled us to add considerably to the accuracy of the geology and topography of this district, while my son has had an opportunity of taking numerous photographs of districts which will be entirely new.

On Saturday week we traversed a magnificent gorge, cut through granite cliffs and extending for several miles, which we believe has not hitherto been described, though it may have been visited by Laborde and Palmer; it commences at the head of the Wâdy el Ain, and on Sunday, 25th, we encamped lower down the same valley. We found the escarpment of the Tih in the district where we crossed much more broken and indeterminate than is generally represented on the maps, owing to the existence of several large faults or dislocations of the strata which traverse that district in a generally north and south direction; and we have finally determined the position of the leading line of fracture to which at least this portion of the Wâdy el Arabah primarily owes its existence. I regret to have to announce that our course towards the Salt Sea by this valley is barred, owing to a blood feud between the Alowyn and Teyahah tribes; this is a serious disappointment to us all, as it may render it impossible for us to visit the southern extremity of that sea. We have, however, entered into a contract with Sheikh Mohammed Ibn Jad (of the Alowyn tribe), by which he undertakes to escort us to the Wâdy Musa and Petra, and one day's march further up the Arabah, after which we shall have to strike off west into the Tih plateau—somewhat in the line traversed by Palmer, Drake, and Robinson—to Gaza, whence we shall make our way by Jaffa to Jerusalem. This will enable us at any rate to explore about two-thirds of the Wâdy el Arabah, to determine the position of the principal elevations, to ascertain the height of the dividing ridge between the Gulf of Akabah and the Salt Sea, and to examine Mount Hor and Petra, from which we hope to be able to bring home for the first time some good photographs. It will also enable me to make a geological traverse of the district bordering the southern extremity of Western Palestine; so that there is some compensation for our disappointment. We are all in excellent health and good form, notwithstanding the heavy marches and considerable fatigue; and we have made excellent collections illustrating the botany, geology, and zoology of the district we have traversed.

III.

December 26th.

My last letter was written at Akabah : I hope it has been received. I expected that my next would be from Gaza or Jerusalem, but a series of unforeseen events has caused me to date from Es Safeh, in the Ghor.

Let me say in the first place that we are all safe and well, and that up to our entrance into the Ghor eleven days since, everything had gone as prosperously as could have been anticipated. In my former letter I stated that our way to Jerusalem was blocked, as Mohammed Jad refused to take us down into the Ghor, and we left Akabah with the full expectation of reaching Gaza, and so on to Jerusalem. Our party was placed under the immediate escort of Mohammed's brother Ali, and after some difficulties with the Arabs we ultimately got off on 3rd ultimo, and proceeded up the Wâdy el Arabah by easy stages, all our party being busily engaged in making observations in their several departments.

On reaching the watershed, on the 7th, Sheikh Ali made an unexpected proposal to the conductor, Bernhard Heilpern, to the effect that for a certain sum he would take us down into the Ghor, to the camp of the Ghawarneh, to within two hours' march of the Salt Sea, and thus enable us to carry out our original intention of marching through the Arabah direct to Jerusalem. We gladly accepted the proposal, and the sum of 100 dollars (about £17) was agreed upon, while the Sheikh promised to remain with us in the Ghor till means of transport should arrive from Jerusalem. This change of route was most acceptable, as it enabled Kitchener and myself to carry out our respective surveys through the whole length of the Arabah, and saved a long and wearisome journey over the limestone tableland of the Tih. With glad hearts we turned our steps up Wâdy Kusheibeh, and pitched our tents at the base of Mount Hor, which we determined, if possible, to climb, and also to visit Petra.

Mount Hor was an important trigonometrical station for Kitchener, and I was also anxious to examine the geology of this district. We were soon visited by a party of mounted Arabs from Petra and Wâdy Musa, who demanded most exorbitant terms for permission to visit these sacred spots, and it was only after long discussion, and striking tents with the determination to leave the spot unvisited, that anything like possible terms could be obtained. On the morning of the 10th, long before daybreak, our party set off, guided by a lantern, and made the ascent of the mountain, where Kitchener was able to make his observations. We then descended into Petra, made a hasty visit of the ruins, and, after passing through scenery of the grandest kind, reached our camp long after sunset. This expedition was attended with the most interesting geological and botanical results. On Saturday, 15th, we reached the edge of the Ghor, and descending next morning, pitched our camp in the valley, where we were visited by Sheikh Arari, and his party of mounted Bedouins, from Wâdy Musa. We consented to pay him 30 dollars for passing through a portion of his territory in the Wâdy el Arabah, but have sternly refused the

repeated demands of some of his followers for further backsheesh. Before arriving at the edge of the Ghor we had sent two Arab messengers to Jerusalem, with intelligence of our arrival, and a request that horses and mules should be immediately sent down by Mr. Cook's agent to the camp of the Ghawarnehs on which to proceed to Jerusalem. You may imagine our disappointment on receiving the intelligence, on the return of the messenger, that a rigid quarantine had been established for all parties coming from the south, and that the Turkish governor had ordered that we should proceed to Gaza, where we must pass fifteen days before being allowed to enter the city, and that the mule-drivers themselves would have to remain with us in quarantine for the same period. Unhappily for us the agent requested further instructions before sending the mules, and notwithstanding that we have sent two sets of messengers with information that we have no means of leaving this spot, we have been now ten days in the Ghor, practically prisoners. Sheikh Ali refuses to cross to the other side of the Dead Sea with us, and the Ghawarnehs have no means of carrying baggage. This delay, with the probable quarantine which may follow at Gaza, is most vexatious; but we have been endeavouring to turn our enforced delay to the best account, by making observations in the neighbourhood. Kitchener has completed his triangulation up to the south shore of the Salt Sea; Hart has added largely to the known flora and fauna of the district; Lawrence has taken a continuous series of meteorological observations; my son has taken about eighty large photos, and a good many small ones; and I have made a tolerably complete geological survey of the Wâdy el Arabah, on the enlarged map of Dr. Smith's atlas, kindly presented to me by Mr. John Murray. We are in hourly expectation of the arrival of the mules; and yesterday we endeavoured to keep up the traditions of old England by having for our Christmas dinner roast turkey and plum pudding, and we duly remembered our absent friends over our penultimate bottle of claret.

IV.

New Year's Day, 1884.

I left off my letter in the Ghor, and now conclude it from Gaza. Shortly after concluding, an Arab arrived with the happy tidings that he had seen a large party of mules and horses crossing the marsh, and that they would be with us before sunset. A loud hurrah greeted this news, and I *backsheeshed* the messenger on the spot. Towards sundown the tinkling of bells was heard, and soon after the whole *cortège* arrived at our camp. Preparations were immediately commenced for an early departure on the next day, and the amount of backsheesh to be presented to Sheikh Ali and the Ghawarneh Sheikh was arranged between ourselves and the conductor. We were astir early next morning, and soon after sunrise, mounted on our spirited little horses, we were wending our way through the groves bordering the Salt Sea. That day's march was a long one: we crossed the

marsh, examined Jebel Usdum, and then ascending by Wâdy Suweireh made our way towards our camping ground, in Wâdy el Abd, which we did not reach till three hours after sunset, making twelve hours in the saddle! The following day we camped at Tel-el-Mihl, and the day after at Bir-es-Seba, a spot of peculiar interest to us all, from its connection with the patriarch Abraham. The next day brought us to Tel Abu Harari, and yesterday (December 31st) we entered our quarantine ground in the suburbs of Gaza. We entertained hopes to the last that the Pasha of Jerusalem would have relented. But a kind letter from Mr. Moore, our Consul at Jerusalem, informed me that his efforts in this direction had been unavailing, and that our only prospect of getting out of quarantine before the lapse of the fifteen days would be by telegraphing to Lord Dufferin, with the request that he would use his influence with the authorities at Constantinople. This I have done, and we now await the result. This enforced imprisonment will cause a serious loss both of time and money, as we have to bear all our own expenses, and, in addition, those of the muleteers, and even of the soldiers who are keeping guard over us. One advantage, however, has resulted. We have been able to make a complete traverse across Southern Palestine, and in part by a road not hitherto explored by previous travellers. Our quarters here are comfortable and cheerful, and we are all in good health. Kitchener yesterday left us on his return to Cairo. I forgot to mention that on the 24th ultimo a party of four Arabs arrived from Cairo on camels, bringing a letter from the Consul-General, to the effect that he had received a telegram from the Foreign Office expressing anxiety on our behalf, on the part of the Committee, consequent on the defeat of General Hicks's army in the Soudan, the news of which it was supposed might stir up a hostile feeling among the Arabs towards Europeans. We had not before heard of this unhappy event; but it was speedily known among all the Arabs around. We took care to inform them that Hicks's army was composed of Egyptian and not of British troops. The Cairo Arabs determined to remain with us until we moved out of the Ghor, and accompanied us to Tel Abu Harari, from whence they and Kitchener proceeded to Cairo, carrying a reply to the letter of Sir E. Baring. I ought to mention that the Rev. Mr. Shapira, of the Church Missionary Society, met me on arrival yesterday, and has been most kind in giving us assistance in various ways.

V.

January 17th, 1884.

My last letter to you was from Gaza, where we were sentenced to be shut up in quarantine for fifteen days. I telegraphed immediately to Lord Dufferin, on the recommendation of Mr. Moore, Consul at Jerusalem, to ask his Lordship to use his exertions for our release. Owing to his active and friendly interposition, we received notice of our

release on the fifth day. This was on Saturday morning, and we were soon in the saddle to visit Gaza and its environs, and also call on Rev. Mr. Shapira, and thank him for his unremitting attention. Next day, after Divine Service in the tent, we started on our journey to Jaffa, which we reached the day following, and put up at the hotel in the German settlement. This enforced visit to Gaza must not be considered in any way as loss of time, as far as the journey itself is concerned; it enabled Kitchener and Mr. Armstrong to join up the survey to that of Southern Palestine, where it terminates at Beir-es-Seba, and it gave me the opportunity of making a geological traverse of Southern Palestine. The coast journey from Gaza to Jaffa was also of much interest to the whole party. We reached Jerusalem on Wednesday evening (9th), having slept the previous night at Ramleh, at the hotel kept by another German settler, the quarters being clean and comfortable. The ascent into the central tableland of Judæa was most interesting to us all, both on account of the geological and botanical observations it enabled us to make, and connected with our subsequent expedition down to the Jordan Valley has enabled us to make a complete traverse of what may be called the central portion of Palestine. Our journey northwards to Beyrout will complete a third traverse (Sea of Tiberias to Haifa), as well as enabling us to see much of the interior of the country. This exactly falls in with my original plans. We have been most kindly received by Mr. Moore (H.M.'s Consul), Dr. Chaplin, and several other friends of the Palestine Exploration Fund, including the American Consul, Dr. Merrill. On account of pressure of time, we have been obliged to abandon the proposed expedition into Moab, and have contented ourselves with a descent into the Jordan Valley, from which we have just returned. Our plans for the future are as follows:—

We propose to leave this on Monday morning, 21st, for Beyrout, by the Sea of Galilee, Samaria, Mount Carmel, and thence northwards by the coast road. This journey will occupy about fifteen days, and we hope on arriving at Beyrout to find a steamer which will take us to Constantinople. The quarantine, which has now been in operation for several months, has upset everything—paralysing trade, and rendering communications with other countries uncertain. There is now a prospect of its termination, and we have reason to believe that Lord Dufferin's exertions on our behalf have contributed to this much desired result. Under these arrangements we hope to reach London about the middle of February. We have despatched boxes of specimens from Jaffa, and Mr. Armstrong will take charge of some of the instruments which were brought out by us. He is now busily engaged in plotting the triangulation, and, I believe, intends to proceed to Cairo, when it is in an advanced state, in order to confer with Kitchener before returning home.

VI.

23rd January, 1884.

Our expedition has been brought to a stand in a most unexpected manner. We have been snowed up in the Sacred City since Monday, and will be unable to move till the day after to-morrow.

We had returned on Friday from our expedition to Jericho and the Lower Jordan Valley, and had everything prepared for an early start on Monday morning northwards to Beyrout, when Bernhard Heilpern came to our bedroom doors about 7 a.m., saying, "You need not get up, gentlemen; you cannot move—snow is a foot deep already." And so it was; and the fall continued during Monday and part of Tuesday, till it reached 2 feet and over in depth, and rendered all egress impracticable. Even the best road in Palestine, that is, from here to Jaffa, has been closed and the telegraph wire broken. The fall of snow was accompanied on Tuesday by a terrific gale from the west. Trees have been uprooted or broken and much damage done. However, a thaw set in last night, and continued to-day, and the weather now promises to settle. But a fourteen days' journey on horseback, over mountains and valleys, and sleeping in tents by night, is out of the question now. Even if practicable (which is doubtful) I feel I should not be justified in exposing our party to such a risk to their health. The country will be flooded for some days, the rivers swollen, and the air cold and damp in the extreme.

I have arranged, therefore, to proceed to Jaffa the day after to-morrow, when we hope the road will be practicable, and take the first boat we can get to Beyrout—thence return home *viâ* Constantinople. Even did time permit, there would be little use at the *beginning* of the winter in remaining here with the prospect of completing a survey which could only be properly done in good weather. This we might have done had it not been for our two detentions: one in the Ghor for ten days, waiting for horses from Jerusalem; the other of five days in quarantine at Gaza. This is our third forcible detention since entering Palestine, and perhaps the least to be expected—to be snowed up in Jerusalem!

The results of our expedition, however, are not materially marred by this unlooked-for obstacle. The geology of the northern portion of Western Palestine is already pretty well known, and a *reconnaissance* would not have resulted in any material alterations (as I feel sure) of Lartet's map. Our excursion to Jericho, Mar Saba, Bethlehem, &c., together with our previous traverse of Southern Palestine, have enabled me to obtain a good knowledge of the structure both of Central and Southern Palestine. Of our previous work in the district of the Wâdy el Arabah and the Sinaitic peninsula I need not say anything here.

NARRATIVE OF AN EXPEDITION THROUGH ARABIA PETRÆA, THE VALLEY OF THE ARABAH, AND WESTERN PALESTINE.

By Professor HULL, LL.D., F.R.S.

(Geologist-in-Chief.)

THE work of the Palestine Survey, which had been partly completed in Moab by Captain Conder, R.E., having been interrupted through the opposition of the Turkish Government, the Executive Committee of the Palestine Exploration Fund determined to undertake a geological reconnaissance of Western Palestine and the Jordan Valley, in accordance with the programme of work to be done under the auspices of this admirable Society. The Topographical Survey of Western Palestine had now been completed and published, so that the time seemed ripe for investigating the physical phenomena of Western Palestine, the Valley of the Jordan, and of the deep depression in which lies the Salt Sea.¹ An offer to undertake this exploration having been made to me by Colonel Sir Charles W. Wilson, on the part of the Executive Committee of the Palestine Exploration Fund, I consulted with some friends regarding the nature of the countries to be traversed, climate and other matters; and having received sufficiently encouraging replies, I gladly accepted the offer, and began preparations for carrying it out:—the Lords of the Committee of Council having been so good as to grant me three months' special leave of absence from my official duties in Ireland.

I had long taken a deep interest in the physical history of Palestine. I had read nearly everything that had been written on the subject, including the great work of M. Lartet, the geologist attached to the expedition of the Duc de Luynes, and had even gone so far as to deliver a public lecture on the physical history of the Jordan Valley and the Salt Sea in the theatre of the Royal Dublin Society.² Little did I think, when delivering that lecture, that I should have an opportunity in a few months' time of testing the correctness of my views by actual observation on the spot! Such, however, was the case; and within a few weeks I was busily engaged in my preparations for departure for the Holy Land.

It was of first importance to choose suitable companions. The Committee kindly allowed me to select an assistant; and I gladly accepted the

¹ I prefer this name to that of the "Dead Sea," a name of much later origin, and originating in a misconception. The name "Salt Sea" (Gen. xiv, 3) is peculiarly appropriate to an inland lake of such intense salinity, and was in use at the time when the Pentateuch was written. The Arabic name for this lake is "El Bahr Lut," the Sea of Lot.

² An abstract of this lecture appeared in *Nature*, March, 1883.

offer of my son, Dr. E. Gordon Hull, to accompany me in that capacity, and also as honorary medical officer to the party. Captain Kitchener, R.E., then in Egypt, was nominated by the Committee to undertake the topographical survey of the Wâdy-el-Arabah, and northwards as far as the shores of the Salt Sea, so as to join up the triangulation with that of the Ordnance Survey of Palestine ;¹ and Mr. Armstrong, formerly Sergeant-Major R.E., who had taken part in nearly the whole of the previous survey, was appointed his assistant. It is scarcely necessary for me to say with what pleasure I received the tidings of the appointment of Captain Kitchener as my colleague. I was aware of his great experience in the work of the Palestine Survey, of his knowledge of the character and customs of the Arab tribes amongst whom we were to travel, and of his ability to converse in their language. All this inspired an amount of confidence of ultimate success I should not otherwise have felt, and the result proved that my confidence was well founded. In matters connected with our dealing with the Arabs I readily deferred to his judgment, which I always found to be judicious, while he often acted as spokesman in our negotiations with the Sheikhs.

It was a matter of first importance to the safety of the party, and towards the attainment of our objects, that great prudence should be exercised in dealing with the Bedawins ;—at least we supposed so. The unhappy murder of Professor Palmer, Lieutenant Gill, and their companions, by the Bedawins of the Tih, was still fresh in our memories, and sometimes caused a cold thrill when I thought thereon. Some of my more judicious friends, when speaking with me on the prospects of my journey, accompanied their congratulations and good wishes with gentle hints to beware of the treacherous Bedawin, and “to remember the fate of Palmer.” They little thought, kind souls, how they were adding to my own mental anxiety, which I trust I did not allow any one to share, or even suspect. I kept it under lock and key, along with Besant’s narrative of that horrible tragedy, and insisted, in reply to my friends, that the circumstances of Professor Palmer and myself were entirely different, which was undoubtedly the case, and that in the capture and execution of the murderers the Bedawins had received a lesson which they would not readily forget—such being the view that my friend and counsellor, Sir Charles Wilson, had endeavoured to impress upon me.²

As will be seen in the sequel, both the scope and area of the Expedition

¹ The Palestine Survey Map, published on a scale of $\frac{3}{4}$ of an inch to one statute mile, takes in the western shore of the Dead Sea as far as Sebbeh ; from this the southern boundary runs along Wâdy Seiyal, Wâdy-el-Milh, Wâdy-es-Seba, and the Wâdy Ghuzzeh, to the shore of the Mediterranean Sea, south of Gaza.

² The matter is very fully gone into in Besant’s “Life of Professor Palmer.” There can be no doubt, as we afterwards learned on the spot, that Palmer’s death was planned by the agents of Arabi Pasha, and that the Arabs, who were to a man on Arabi’s side, were only carrying out the orders they had received from Egypt.

were considerably enlarged as time went on. In the letter¹ of Mr. Glaisher, F.R.S., Chairman of the Executive Committee, in which the route and objects to be kept in view were definitely settled, it was stated that we were to proceed overland to Egypt, where we should be joined by Captain Kitchener, and from thence strike into the Desert of Sinai, which we were to traverse as far as the head of the Gulf of Akabah. From thence we were to proceed northwards along the whole length of the Wâdy-el-Arabah, to the southern end of the Salt Sea, and proceeding along the western shore as far as Ain Jidi (Engedi), turn up into the tableland of Judea to Hebron, from whence the officers of the Engineers were to return to Egypt, while the other members of the expedition were to proceed to Jerusalem, and organise another expedition into the Jordan Valley, Moab, and Northern Palestine. It will thus be seen that a tour of unusual extent and interest was placed within our reach, including countries and places second to none in importance from their sacred associations, their historical antecedents, and the physical conditions under which they are placed. The Committee also took care that everything should be done for the comfort and safety of the travellers. The Egyptian Government, through the Foreign Office, offered an escort as far as Akabah, the limit of Egyptian territory ; but as we had no reason for apprehension from the Arabs in the Sinaitic peninsula, we did not think it necessary to avail ourselves of the kindness of Cheriff Pasha, who had offered through Kitchener to give us every assistance in his power. The district where an escort of soldiers was likely to be of use lay between Akabah and the Salt Sea, and here the Egyptian escort would be unable to accompany us.

The party as it now stood consisted of four ; but it was obviously desirable that it should include a naturalist, who should make notes and collections of the representative fauna and flora of the district to be traversed ; and of a meteorologist, who should also make observations on the temperature, rainfall, and aneroid determinations of the levels of special points along our route. I therefore cast about in my mind for volunteers having the necessary time and qualifications to undertake those departments of research, and was most fortunate in both instances. Mr. Henry Chichester Hart, who joined us in the former capacity, had been personally known to me for several years as an ardent investigator of the flora of Ireland, having made several reports on the botany of special districts of that country, under the auspices of the Royal Irish Academy. He had also acted as Naturalist in the expedition of Sir George (then Captain) Nares, R.N., to the Arctic regions, which had penetrated as far north as 83° 14' lat. To these antecedents Mr. Hart added uncommon powers of enduring bodily fatigue ; and he proved a most agreeable addition to our party, owing to his imperturbable good humour, and the extent of his knowledge on natural history subjects. Mr. Reginald Lawrence, Associate of the Royal College of Science, Dublin, who accepted my invitation to act as Honorary Meteorologist to the Expedition, had also been my personal

¹ Of date 7th July, 1883.

friend for several years, and from my knowledge of his antecedents and ability I felt sure he would prove the right man to complete our quorum ; and in this I was not disappointed. Never, I feel sure, were six persons more happily associated in an undertaking of this kind. Throughout our whole tour the utmost good feeling prevailed amongst the members ; each took an interest, not only in his own department, but in those of the others, and tried to assist in them as opportunity offered. My son, having had considerable practice in photography, undertook to bring home photographs of the district through which we were to pass, and through part of which no photographer had as yet penetrated. Our expedition was thus tolerably complete in all its branches.

It had been suggested to me by my friend Dr. W. Frazer, of Dublin, that our progress might be facilitated, and our comfort increased, if the travelling arrangements were entrusted to the well-known firm of Messrs. T. Cook & Son. This suggestion I mentioned to the Secretary to the Palestine Exploration Fund, who had an interview with Mr. John M. Cook, the managing partner of the firm, at the head office, Ludgate Circus. The result of this interview was most satisfactory, as Mr. Cook offered to undertake the whole of our travelling arrangements, whether by land or sea, to provide tents, food and attendants, and to advance money when needed to the members of the party. All this was to be done "without the slightest profit, directly or indirectly, to the firm," owing to the interest which Mr. Cook personally took, not only in the Palestine Exploration Fund, but also in the Expedition which it was about to send out.

This handsome offer on the part of Mr. Cook was accepted by the Committee, whose energies were now to be restricted to providing the instruments for carrying out the scientific work of the Expedition.

Several days were spent in London by all the members of the party in making preparations. Theodolite, compasses, aneroids, thermometers, photographic apparatus, guns, revolvers, ammunition, geological hammers, maps, suitable clothes, stationery, and many other articles had to be provided, packed, labelled, and despatched. Mr. Armstrong was to follow in a few days by steamer from Marseilles, and join us in Egypt. My son and I met the Committee in Adam Street for a parting consultation and farewell, which was very warmly given us by the Chairman, Mr. Glaisher. On the day following we all dined with my brother-in-law, the Rev. H. Hall-Houghton, at the National Club,¹ Whitehall, and on Saturday we took our seats for Dover in the train at Ludgate Hill Station, Mr. Cook being on the platform to see us off, and wish us "a good journey." We crossed the "silver streak" during an interval of comparative tranquillity, and in a boat, fortunately, other than the "Calais-Douvres," so reached Paris in the evening, without having had to undergo the usual passage experiences.

¹ Mr. Hall-Houghton is a member of the General Committee of the Palestine Exploration Fund, and was present at the meeting of the Special Committee on the previous day.

We left Paris for Milan by the "through train," *viâ* Bale, on Sunday evening. Our train was to have been in connection with another leaving Bale about noon, but as we approached this city our progress gradually approximated to a walking pace. With a view, doubtless, to reciprocity, as we got impatient the train slackened pace, with the not unexpected result that we were late for the train into Italy. The day was wet and cold, and in order to pass a part of it in motion we took the next train to Lucerne, hoping for a change. But this beautiful city was draped in sombre garb. A canopy of cloud shrouded from our view the mountains, while a ceaseless drizzle damped our desire for sight-seeing. Some of the party, however, visited the remarkable "glacier garden" near the city; and after dinner at the hotel we were glad to find ourselves again in the train, notwithstanding the disappointment of being obliged to cross the Alps at night. But though night, all was not dark. As we ascended the mountains towards the St. Gothard Tunnel the canopy of cloud melted away, and about midnight the moon and stars shone forth, illuminating the snowclad heights on the one hand, and throwing into still deeper shade the ravines and frowning precipices along which we threaded our way. On issuing forth from the tunnel on the Italian side, and as break of day approached, we found the sky clear, and we descended into the plains of Lombardy amidst a blaze of sunshine, which cheered our spirits; and under such circumstances we drove through Milan, visited the Cathedral, and in the afternoon took our seats in the train for Venice, which we reached after dark. It was a new experience for all of our party but myself to find ourselves seated in a gondola, and piloted along through the canals—under numerous archways, and alongside the dark, mysterious walls of houses, churches, and palaces, to the steps of Victoria Hotel, where we were soon comfortably housed, to await the departure of the P. and O. steamship "Tanjore" for Egypt on the following Thursday.

We endeavoured to put our time to good account, and see as much of the "Queen of the Adriatic" as possible. I found that my former visit had in no way lessened the pleasure of a second visit, and I saw and heard much that had escaped me previously. Engaging the services of a very efficient guide, who informed us that he had accompanied Mr. Ruskin when collecting his materials for "The Stones of Venice," we made a very full examination of the Palace of the Doges, the Duomo of St. Mark, and other sights of this wonderful city; and in the evenings we sipped our coffee under the collonade of the Piazza, listening to the music of a very fine military band, or gazing with wistful eyes into the brilliantly lighted shops, so eminently calculated to elicit the last lira from the pocket of the beholder. Though we made some purchases, I fear our stay in Vienna did not add materially to the wealth of the city. We recollected there were bazaars in the Eastern cities we hoped to visit with objects of still greater novelty than those even of Venice.

Owing to the quarantine regulations, the "Tanjore," Captain Briscoe, was unable to come up to the Grand Canal, so we left Venice in a steam launch, in which we were conveyed down through the lagoons to the place

in the bay where our good ship rode at anchor. We passed several islands and forts, amongst others one built by the Genoese in the fourteenth century. Several others, rising from the lagoons, were erected by the Austrians in 1859-60. These lagoon islands are in some cases of vast extent, and are covered by the waters of the Adriatic when the wind blows strongly from the south. In 1875, on the 5th January, a south wind banked up the waters till they overflowed most of the islands, and for two days the Piazza of St. Mark was submerged to the depth of from 4 to 5 feet.

We found the "Tanjore" crowded with passengers when our contingent had come on board. These included General Sir Evelyn Wood and party returning to Egypt, and several persons bound for that country, as well as for Cyprus and India, whose company we enjoyed till we reached Port Saïd. In the evening we weighed anchor, and steamed down the nearly smooth waters of the Adriatic, often out of sight of land, but sometimes with distant views of the coasts and islands of Italy on the one hand, and of Dalmatia on the other. One of the islands, called "The Half-way Rock," rose as a sharp ridge, apparently of limestone, from deep water.

Early on Saturday morning, we steamed into the harbour of Brindisi as far as the coaling depôt of the P. and O. Company, and we had all to turn out of our berths pretty early, in order to pass muster before the medical officer, who was pleased to give us "a clean bill of health," without a very strict *diagnosis* of each case. On this and a subsequent occasion I had an opportunity of observing the absurd nature of quarantine regulations. Like the passport system, that of quarantine only seems to give to travellers gratuitous trouble and expense, without accomplishing the object for which it is supposed to be instituted. How this was illustrated in our own case will be noticed in the sequel. In the case of the "Tanjore," it was so long since she had left Egypt (from which the cholera had almost disappeared) that any case on board would have manifested itself long ere she had entered the Venetian waters; yet she was not permitted to enter the harbour, and her passengers coming from the west and north of Europe, where cholera had never entered, were subjected to inspection on reaching Brindisi!¹

We spent Saturday and Sunday in this port, awaiting the arrival of passengers and mails for Egypt and India. The time was agreeably occupied in visiting the town and surrounding country in company with one or two friends, amongst whom I may be allowed to mention the name of Mr. Sinclair, R.E., Secretary to the Governor of Cyprus, Sir R. Biddulph. Both the plants and animals of this neighbourhood indicate

¹ That Egyptian cholera comes, not from India, but from Mecca and Mina, and is generated amongst the thousands of pilgrims who annually are collected for several days within an exceedingly limited area, where they are subjected to the effects of breathing foul air, drinking corrupted water, and living in filth and privation, will be conceded upon reading the "Rapport sur la dernière épidémie de Choléra à la Mecque," in the *Gazette Médicale d'Orient*, September, 1883, by M. le Dr. Abdur-Rassack.

an approach towards those with which we were afterwards to become familiar in Egypt. The low cliffs of the shore, formed of yellow tufaceous limestone, abound in shells of late Tertiary age,¹ some identical with those of the adjoining waters, while the ground swarmed with bright green lizards, beetles, and ants; butterflies, wasps, and flies also floated about in the air, giving abundant occupation to Mr. Hart in collecting specimens and noting their habits. One peculiar species of wasp here lays its eggs in little balls of mud, in which the larvæ may generally be found.

The sub-tropical vegetation of the district is remarkably rich. Here the graceful date-palm waves its plumes aloft, amidst groves and gardens of olive, figs, oranges, vines, mulberries, and stone-pines. The eucalyptus has been introduced and planted extensively along the roads, while the hedgerows are formed of the bristling lines of the large cactus (prickly pear) and aloes. The cotton-plant is cultivated in ground which can be flooded, while oleanders, myrtles, and other foreign plants adorn the gardens.

The town itself, the ancient Brundisium, visited but scarcely seen by thousands of travellers annually, is of much interest, from its position and history. It stands on an inlet of the Adriatic, and the harbour, of great importance in Roman times, is capable of holding large ships. The harbour is connected by a causeway with a fortification, or castle, standing on the summit of a cliff to the south of the town, and in a commanding position. This is now used as a prison, and the inmates are usefully employed in a variety of reproductive works, such as carpentry, smiths' work, tailoring, &c., at which we found them busy when visiting the place on the afternoon of our arrival. There is a ditch and wall, with towers and gates, erected by the Emperor Frederick Barbarosa, probably on the site of more ancient structures, and amongst the remains of Roman work are two marble pillars, one broken, at the end of the Appian Way.

The country inland consists of an extensive plain, about 200 feet above the sea, richly cultivated in crops of maize, wheat, and cotton, with farmsteads surrounded by gardens of olives, figs, and vineyards. This plain is traversed by the high roads to Rome and Naples, and several ancient fountains, doubtless coming down from Roman times, still afford water for thirsty men and animals by the wayside. The plain, formed of shelly limestone, beds of marl, clay, and sand, was at a very recent geological period the bed of the sea, and its uprising has added thousands of square miles to Italian territory.

On Sunday morning Captain Briscoe held Divine Service in the cabin, and read the prayers and lessons with that solemnity and effectiveness sometimes wanting in the more regular services of the Church; and at 3 o'clock on Monday morning we steamed out of the harbour.

We soon passed from the deep indigo-blue waters of the Adriatic to those of the Mediterranean, which are of a greener tinge, not unlike those of the Atlantic. The voyage was very agreeable, and we only once came

¹ Pliocene according to Collegno's map.

in for a gale, which did not last very long. The view from the deck of the "Tanjore" on Monday towards the north-east was always striking, even at the distance from the land at which we sailed. The bold and rocky mountains of Albania stretched away for miles from left to right, beyond which, at a distance of over thirty miles, might be seen the mountains of Greece, the sun lighting up the peaks and lines of escarpment of white limestone of Epirus, with the island of Corfu in the foreground. Towards evening the coast of Cephalonia and Zante came in sight.

Awaking next morning, we found ourselves approaching Crete (Candia) and now a stiff gale was blowing from the north-east. Rain also was falling, and we began to feel tolerably miserable. The breakfast table was not quite as fully occupied as usual, and some of us found it convenient to retire to our cabins before we had had time to partake of a hearty meal. However, about tiffin the gale moderated, and we returned to the deck to watch the scenery of the island, along whose coast we were sailing at a distance of about twenty miles. This island (as is well known) is mountainous, the peaks of Mount Ida rising to 7,674 feet, and on this day cloud-capped; the sides being cut into deep ravines, clothed with a slight forest vegetation. The sunshine effects were sometimes very beautiful, the higher elevations being so brightly white as to resemble the snow-clad summits of the Alps. Towards evening the sky presented a grand spectacle. Overhead the stars shone forth from the dark blue sky, but from time to time the clouds which hung over Crete were illumined by brilliant sheets of lightning often bursting forth from behind the mountains like the flames of a volcano in active eruption. This scene lasted several hours, while brilliant meteors from time to time streamed across the heavens. The beauties of the sky were so enticing, and the air so balmy, that it was with regret we turned into our berths late at night.

Land now disappeared from view, and we bid farewell to Europe; the blue ring of the horizon was unbroken during the next day. After sunset I went to the bow of the ship to watch the effect produced by the medusæ when tossed up in the foam of the ship's prow. It is a sight full of beauty. Each sheet of white foam, as it was cast aside by the ship's side, was lighted by a thousand silver sparks caused by the phosphorescence of these pretty little creatures, quite invisible to the eye by daylight. I was told that sometimes dolphins may be seen disporting themselves amidst the shoals of medusæ, but on this occasion we were not so fortunate as to see any. On the 1st November we entered Port Saïd at 10 a.m., and for the first time touched the shore of the African continent; I trust, with thankful hearts for all the mercies we had received.

Slowly we steamed up the harbour towards our anchorage, passing a line of steamships of several nations, chiefly British. On passing an Egyptian man-of-war we received a salute (presumably in honour of General Sir E. Wood, but the question has not been decided!) the men standing all along the bulwarks with hand to hand horizontally extended, looking like so many human crosses clad in white, or like shirts hung out to dry. Soon after, a state barge came alongside to take Sir E. Wood and

his party off for Ismailia. It was unfortunately completely filled, so that there was no room for us—doubtless a matter of profound regret to the General, who took his departure amidst much shaking of hands and waving of handkerchiefs. Leave-taking now became general all round. Our passengers broke up into parties for their respective destinations, and at length we tumbled overboard into a boat and rowed for land with the gloomy prospect of a night sail up the canal in a passenger steam-barge amidst a crowd of unsavoury Moslems. Our baggage was carried to the hotel by porters whose powers of endurance seemed little short of those of mules or camels. Mountains of heavy baggage, calculated, one would have supposed, to crush them to the earth, were piled on their backs. All hands helped the men to their feet, and off they started for the Custom House amidst the shouts and gesticulations of their comrades. We were, however, spared the annoyance of unpacking our baggage; the Director-General of Customs having, through Mr. Cook's agent, sent instructions to pass all our baggage and effects unexamined.

During dinner we made a discovery which relieved us of our difficulty. We learned that a P. and O. steamer was to leave Port Saïd at 4 o'clock for Alexandria, and we resolved to take passage in her, and by this way to go on to Cairo. The "Dakatlieh" was airy and not very full of passengers, and after the close packing of the "Tanjore" we felt very comfortable indeed. We had a good night's rest, and were up betimes to view the African coast, evidences of which first appeared in the distant lines of feathery palms. We had been coasting for many miles off the Delta of the Nile, and all along our track the waters of the Mediterranean had changed their ordinary deep blue into a light greenish tinge, in consequence (as I was informed by Mr. Le Mesurier, of the Egyptian Railway Department) of the influx of the Nile waters.

It is unquestionable that the Nile carries down large quantities of mud into the Mediterranean, which is taken up by the prevalent eastward current, and finds its way into the harbour of Port Saïd, where dredging operations have constantly to be carried on at heavy cost in order to keep the channel of the required depth. The Damietta branch of the Nile may, from its position with reference to Port Saïd and the ship-canal, be considered the more immediate cause of the silting up of the canal bed.

This source of expense and danger to the navigation Mr. Le Mesurier proposes to meet in the following way¹:—It will be observed on referring to a map of the district, that between the harbour of Port Saïd and the Suez Canal on the one side, and the Damietta branch of the Nile on the other, lies the great inland lake of Menzaleh, through which the canal has been carried, chiefly by dredging, for a distance of twenty-seven miles. The portion west of the canal still remains under water, but that to the east is now dry. This western portion, covering an immense area, Mr. Le Mesurier proposes to convert into a great precipitating basin for the Damietta branch,

¹ The project I only give in outline, as kindly communicated to me by Mr. Le Mesurier himself, during our stay on board the "Tanjore."

the effect of which would be *ultimately* to convert this tract into a vast field for agricultural purposes, while the waters which would pass off into the Mediterranean, being to a great extent deprived of their silt, would cause *immediate* relief to the harbour of Port Saïd, and that part of the canal which opens into it. This is a grand scheme, calculated to be of benefit both to the agricultural and commercial interests of Egypt. I can only express the hope that Mr. Le Mesurier may have the happiness of seeing it one day put into execution.

On approaching Alexandria, a pilot came on board to steer us through the intricate channel by which the harbour is entered; and on rounding the point of the large breakwater, we came in view of the city and its harbour¹ all at once, a view calculated to afford both pleasure and surprise,—pleasure at its beauty; surprise, that a harbour and city so recently the scene of a tremendous bombardment should, at first sight, present such slight traces of the conflict. In front lay the city, built on a gradually-ascending slope, and in the background to the left the elevated and fashionable suburb of Ramleh. On the left of the harbour, the Fort of Pharos, partly in ruins, and lighthouse, the Palace of Ras-et-Teen, white and glistening in the sunshine, and surrounded by pleasant gardens. On the right, the barracks, fortifications, and lighthouse and other public buildings; and in the distance, the noble column known as “Pompey’s Pillar.” The harbour itself was gay and busy; ships of many nations lay at their moorings, both merchantmen and passenger steamships; while the beautiful yacht of the Khedive swung at anchor in the centre. The surface of the water swarmed with smaller craft and barges, amongst which was one to convey on shore Her Majesty’s Consul, Mr. Cookson, who had made the passage with us from Suez, and whose acquaintance we had the pleasure of making. He kindly insisted on sending us ashore in his barge, and told off his *khawass* to accompany us to our hotel, and afterwards to conduct us over the palace and fortifications. Owing to this kind action on the part of Mr. Cookson, we were enabled to see the principal sights of this ancient city to the best advantage; nor did his servant leave us till he had seen us off in the train for Cairo in the evening.

We found much of the city in ruins—ruins caused by the mob, not by foreign guns; and, as much uncertainty prevailed as regards the future of Egypt, restoration and rebuilding were proceeding but slowly. It only required the British Government to make the announcement that at least a contingent of our troops should be allowed to remain in Egypt for the preservation of order to induce capitalists to come forward and commence building. But this the Government had hesitated to do, and confidence in the future was consequently shaken. Who that knows Egypt can doubt that a permanent protectorate, supported by a sufficient British army, would prove a blessing of incalculable value to the country?

No object in Alexandria interested me more than the noble monolith

¹ The city has two harbours—the western or Eunostus, and the eastern, or New Port. We entered the western.

known as "Pompey's Pillar." The name is misleading, as one naturally associates it with that of the great Roman General ; but, as the Greek inscription shows, it was erected in honour of Diocletian during the prefecture of Pompeius, in the year 302.¹ But whatever its origin, its immense size and beautiful proportions strike the beholder with admiration. Like most of the Egyptian monoliths, it is of red porphyritic granite, 73 feet in length, with a circumference of 29 feet 8 inches, highly polished, standing on a pedestal, and surmounted by a capital 16 feet 6 inches in diameter, giving a total height of very nearly 100 feet to the monument. It may well be doubted whether a monolith of this description belongs to the epoch of the Roman occupation. It is far more likely that its origin dates back to that period of very ancient Egyptian art which gave birth to the obelisks, the Sphinx, and the Great Pyramids. Its original birthplace was amongst the granite quarries of Upper Egypt, and whether hewn fresh from the native rock, or taken from some more ancient structure, it was a work of no small skill to transport it from its original site and erect it upon the elevated platform of solid limestone from which it is visible for miles in almost every direction.

It is to be hoped that Pompey's Pillar will defy the cupidity of foreign states. Within a few years the two companion monoliths of the ancient city have been carried away : one to adorn the banks of the Thames, the other those of the Hudson. Who that visits the modern cities of Europe, and witnesses the monuments of ancient Egyptian art, of which that country has been stripped, in order that *they* may be adorned, can restrain a sigh of regret at the spoliation of the land where art of the grandest conception had its birthplace and its maturity while that of Greece and Rome was still in the future ?

We left Alexandria in the afternoon, in company with an officer of the army of occupation, and travelled along a route, to us, new and full of interest. The railway at first passes along enormous mounds of broken pottery. And here I may mention that in the East, often when all traces of buildings have disappeared, fragments of pottery remain to attest the former existence of buildings. The reason of this is that pottery is almost indestructible. Houses, temples, churches, may have been laid in ruins, the materials broken up and carried away, but a "potter's vessel" when once broken is useless for any purpose ; no one cares for it, and it is left to add to the accumulations which take place at every town or village.

Soon we emerged on the Garden of Egypt, the fertile Delta of the Nile, without which, indeed, Egypt would be but a rocky or sandy desert penetrated by a deep gulf, as the Egyptian priests informed Herodotus was its original condition. Interminable fields of maize, cotton, sugarcane, and other produce cultivated by the fellahin, succeed each other, irrigated by means of little water-wheels, sometimes worked by men, sometimes by bullocks, the water carried in little channels made by the feet, and allowed when required to flow over the beds containing seed ; all probably very

¹ The inscription is given in Murray's "Handbook for Egypt," Part I, p. 132.

SKETCH MAP

to show the

ROUTE OF PROF. HULL'S PARTY

1883-84.

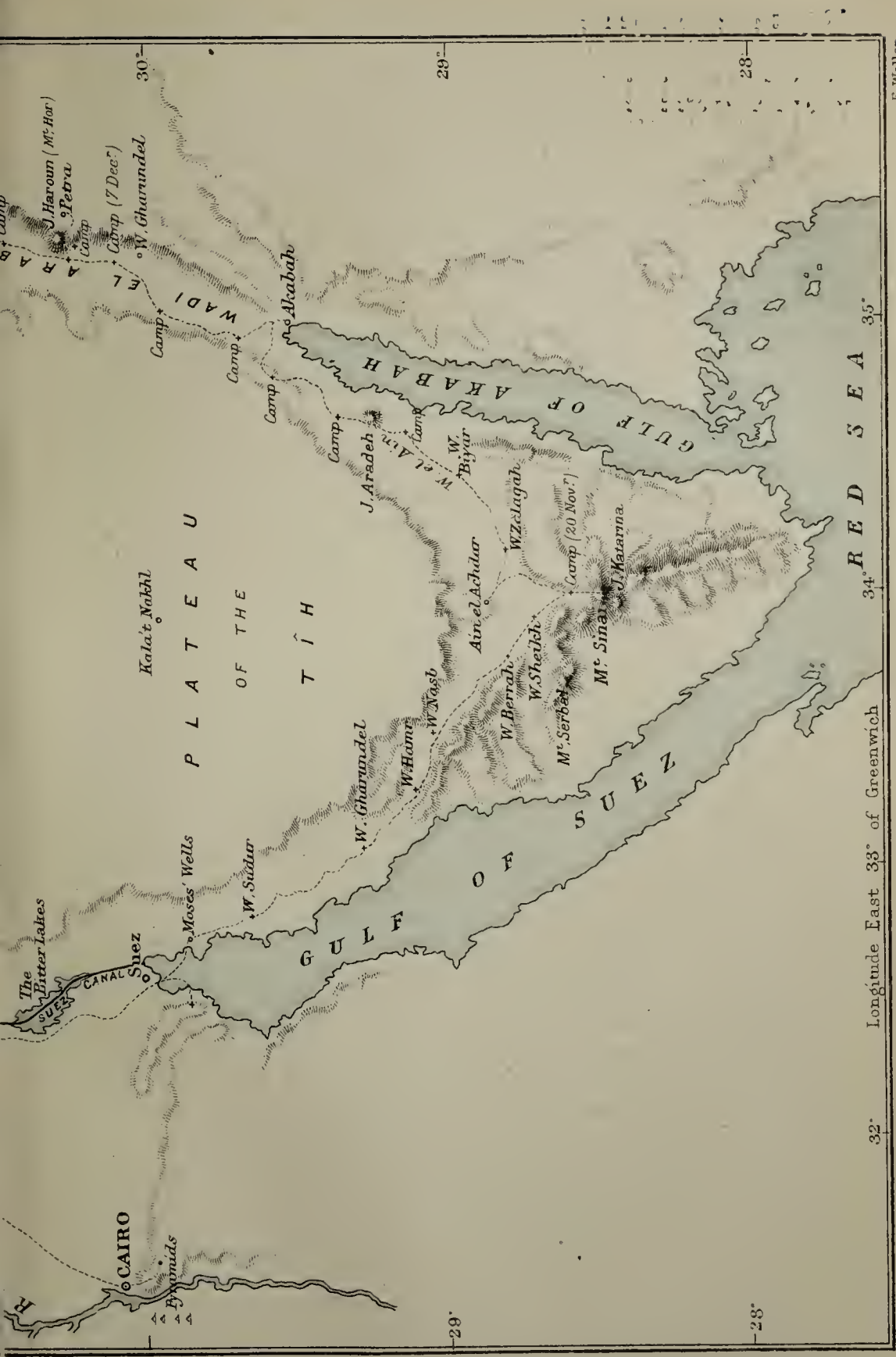
English Miles



Route of the Expedition

M E D I T E R R A N E A N S E A







much as in the time of Ptolemy, if not even earlier. Groves of the date-palm, with enormous clusters of ripe fruit, rose aloft above the level of the Delta, or formed small clumps near the villages.

The cultivation of the palm, and of other fruit trees, was largely extended by Mehemet Ali, who made a decree promising remission of a certain amount of taxation for each tree planted. This had the desired effect. On producing a certificate of having planted so many trees the fellahin had his taxes reduced. Some time after, when the work of plantation had been accomplished, the decree was repealed, and a tax was put on the trees—a financial operation both beneficial to the Government and to the cultivator, who enjoyed the fruits of his labour.

We passed several towns and villages of the fellahin; of the latter nothing can be conceived more miserable as human abodes, in comparison with which a village in Connaught might be considered handsome. The houses consist of small mud cabins, huddled together, in which men, women, and children share the space with dogs, fowls, and pigeons. The cow or donkey does not require shelter at night in this part of the world, so is excluded from the home circle.

We crossed two branches of the Nile, each about as wide as the Thames at Kew, the water of which was as usual turgid. The water had fallen to 6 feet below its maximum, which it reached about the middle of October. The origin of the fine sediment which the Nile always carries in suspension, as well as of the rise and fall of the waters themselves, is now fully understood since the publication of Sir S. Baker's remarkable work.¹ Briefly stated, the origin is somewhat as follows:—The Nile below Khartoom consists of one undivided stream, but at El Damer, about 170 geographical miles lower down, it receives the waters of a great tributary, the Atbara, descending from the highlands of Abyssinia. This river undergoes the most extreme transformations. During the early months of the year the waters are so reduced as sometimes to form only a series of great stagnant pools, in which are collected in very close quarters all the inhabitants of its waters, consisting of fishes, crocodiles, and huge tortoises. The banks, through a long line of country at the base of the mountains, are formed of masses of mud and silt, easily undermined, and liable to fall into the waters on the rise of the river. About June tremendous thunderstorms, accompanied by a deluge of rain, break on the Abyssinian highlands. The waters of the Atbara rise with extraordinary rapidity, and descend with a roar like that of distant thunder, giving warning of the approaching deluge. Soon the channel is filled up with the flood, the banks of mud are undermined, and fall down in large masses into the waters, where they are speedily broken up and converted into silt, the finer portions of which are carried along, and finally enter the Nile, and impart to its waters much of the turgid character for which they are known in Lower Egypt.² The

¹ "Nile Tributaries of Abyssinia," p. 52.

² A good deal of sediment is also brought down by the Bahr-el-Azrek, or the Blue Nile, some of the sources of which also are found in the Abyssinian highlands.

river now becomes a great fertilising agent, and when allowed to flow over the cultivated fields, imparts the necessary moisture, so that under the influence of a powerful sun from two to three crops can be annually gathered off the land ; giving rise to an extraordinary amount of natural wealth. That this sediment originally caused Lower Egypt to be reclaimed from the Mediterranean Sea was known to Herodotus, who calls this country "the gift of the Nile."

Arrived at Cairo one of the first arrangements to be made is for a visit to the Pyramids, always a memorable event in any man's life. After all that has been written upon these grand monuments of Egyptian art it might appear presumption to attempt to add even a small quota of information ; still, at the risk of such an imputation, I venture to give a brief account of my own impressions.

The drive out from Cairo is very charming. Having crossed the river the road runs along its bank for several miles under the shade of overhanging branches of the Nile acacia, and fine views of Cairo and of the range of the Mokattam Hills behind are obtained. Here we happened to meet the Khedive and his retinue on returning from his morning drive, and further on we turned in at a gate leading past the palace built for the Prince of Wales, through groves of oranges, lemons (just beginning to ripen), fields of maize, sugarcane, and cotton. Another turn brought us to the causeway, which runs in a straight line westward towards the base of the platform on which the Pyramids of Cheops and Ghizeh are built, and from which the first view of them is obtained. The first view will probably disappoint the traveller, for the distance is greater than he thinks (owing to the transparency of the air) ; consequently the structures appear smaller than is really the case. The avenue itself is three miles long, in a perfectly straight line, over-arched by acacia trees, whose shady boughs, laden with large fruit-pods, afford a grateful shade from the sun's rays.

The best view of the Pyramids is obtained from a part of the causeway road, about half a mile from the platform on which they are built. From this point the four principal Pyramids are seen ranged in line ; that of Cheops, or "the Great Pyramid," in front ; that of Ghizeh next, and two much smaller ones in the rear. In the background is the ridge of sand which marks the line of the desert, stretching on either hand for miles.

It is well known that these great tombs of Egyptian monarchs are built on a platform of the nummulite limestone, which was partially levelled for the foundation, but which has never been entirely cleared from the accumulated rubbish. This platform of solid rock marks the limits of the Nile Valley. On driving up to the summit of the platform you are immediately beset by a crowd of importunate Arabs, who have mastered sufficient of your language to make you understand that independent action is out of the question, and that you may as well resign yourself submissively into their hands. Having done so, and decided whether you will ascend to the summit or descend into the vast interior, you get breath to cast your eyes upwards along the face of this jagged mountain



1875

1876

side, *as it now appears*, and to appreciate in some measure the vastness of its proportions.

The Pyramids you behold are, however, very different from those of the time of Herodotus. In the first place you perceive that the Great Pyramid is truncated, instead of ending in a point like its neighbour, that of Ghizeh. Again, you observe that the apex of Ghizeh is cased in smooth stone while the whole exterior of the Great Pyramid is formed of step-like rows of masonry. It was not thus that the Egyptian architect handed over his great work to his monarch; for in 1837 Colonel Howard Vyse discovered two casing stones in position, which may now be seen. They are blocks of limestone, 8 feet 3 inches long and 4 feet 11 inches in perpendicular height,¹ and indicate that the whole exterior was encased by polished blocks, giving it a perfectly smooth and glittering surface, well calculated to protect the building from injury, and to give it an aspect of finish and completeness very different from that which it now presents.²

The act of vandalism which has deprived the Pyramids of their outer casing was perpetrated by the Caliphs, who carried away the stones to build the mosques of Cairo; the result being that the general appearance of the exterior gives one the impression that this most ancient of buildings is rapidly disintegrating and destined to fall to pieces in the course of ages. This is no mere fancy. Let any one examine closely the condition of the outer walls, and he will find that they are penetrated by cracks and little fissures in all directions, along which the stone is crumbling away. These are due, I believe, to the expansion and contraction occasioned by the great changes of temperature between day and night; and the consequence is, that when a thunderstorm breaks over the district, as sometimes happens, the loosened pieces are washed down, and fresh surfaces for the sun to act upon are exposed. In course of time, therefore, the Great Pyramid, as well as that of Ghizeh,³ must become a ruin; and for this the only remedy is re-casing.

All our party but myself elected to ascend the summit—I to visit the interior, in hopes of recognising some of Professor Piazzi Smyth's marks and determinations; so, delivering myself into the hands of four Arabs, I dived into the dark passage. This is an undertaking which (as Miss Martineau observes) no one should attempt who is at all of a nervous temperament. You soon begin to repent of your choice when you find yourself within the dark walls, descending deeper and deeper, two savages before and two behind. Occasionally they stop, and put the question, "How you feel, sir?" to which, of course, you reply, "Oh, quite well!" Inwardly you *feel* quite the reverse, but it is no time to allow the slightest hint of timidity to escape. At length, after an indefinite descent, and another equally indefinite ascent, you find yourself in the great interior

¹ Murray's "Guide," Part II, p. 246.

² It is stated by Abd-el-Lateef that the casing stones were polished and covered with inscriptions.

³ The upper part of Ghizeh is still cased with its original polished blocks; hence its apex is pointed.

called the "King's Chamber," dark and oppressive, notwithstanding the flickering of the candles which your guides carry ; and now they take advantage of their opportunity : they demand *bakhsheesh*, produce various "*antiqua*," generally shams, and strive to make you purchase on the spot. Making a virtue of necessity, I promised *bakhsheesh* all round, and that I would make certain purchases upon getting to the open air, it being manifestly impossible to examine these articles with the aid of their gloomy light. This satisfies my tormentors, and after a hasty glance all round, we commence our outward descent, and at length emerge into the dazzling light of day. My guides again produce their "*antiqua*," demand their *bakhsheesh* ; but now it is *my* time to make terms. Seating myself on a stone, I proceed to select what I wish, and to name my own price ; and finally, with a franc each for *bakhsheesh*, send them about their business.¹

The Pyramids are built of nummulite limestone—not hewn on the spot, but brought from quarries situated at the base of the hills ten miles above Cairo, on the right bank of the Nile. The quarries are of vast size, as I was informed by Dr. Schweinfurth ; and one may see the tokens of the care exercised in selecting the stone, soft portions being left, the harder cut out for blocks. The lines drawn by the overseer for the workmen are also visible on the walls. The blocks were transported on a sloping causeway to the water's edge, floated across, and then hauled up a long similar causeway, still in existence, on the opposite side to their destination.

The Sphinx is, however, sculptured out of the native rock, and the horizontal lines of stratification are too plainly visible.² The head is of harder material than the neck, which is formed of softer and whiter strata. Every one must regret the defacement which this grand work of Egyptian art has undergone ; but knowing the custom of Mohammedans to deface all objects which they consider idolatrous, it is not difficult to trace the cause for this act of barbarism.³

The so-called Temple of the Sphinx must excite the admiration of every beholder. It consists of a series of vast rectangular chambers, cut out of the solid limestone, with recesses for tombs. The walls are lined with massive blocks of the red granite of Syene, beautifully cut and polished, and fitting closely. One of the walls lies exactly north and south, so that when the shadow of the sun is coincident therewith it is noonday.

In this temple (as I was informed by one of the guides) Professor

¹ There are three execrable words which were constantly cropping up during our journey, and of which travellers should beware, viz.: "*bakhsheesh*," "*antiqua*," and "*quarantina*." The language would be improved if these were expunged from its vocabulary.

² Our witty, but not very accurate guide, Mark Twain, says the sphinx is made of granite!

³ As witness the defacement of the greater number of the statues in the Museum of Antiquities, Constantinople.

Smyth spent much of his time when engaged in making his measurements for his well-known work.¹

When passing through Alexandria we had the pleasure of making the acquaintance of that indefatigable traveller and excellent geologist, Dr. Schweinfurth, to whom Mr. Hart had a letter of introduction. Having arrived at Cairo just after ourselves, he kindly offered to accompany us on a visit to the Mokattam Hills, at the base of which the city is built, and from which the stone for the construction of the houses and public buildings has been chiefly obtained.

This range of hills, though of no great elevation (600 to 700 feet), forms a fine background to the city, as well as to the Valley of the Nile, owing to the abrupt and scarped face it presents towards the north and west. It is composed of beds of the nummulite limestone, remarkably fossiliferous, both nummulites, shells, echini, and even fossil crabs being abundant. The quarries are of great extent, and the stone beautifully white, or slightly yellow, and capable of being chiselled into fine mouldings and architectural forms. From the summit of the ridge, which had been the sanitary camp of the British troops during the outbreak of cholera, we enjoyed an extensive view, and one full of variety and interest. To the right, at our feet, lay the capital of Egypt, with the streets, palaces, mosques, and churches, interspersed with gardens and groves of trees ; and in the foreground, standing on a projecting platform, the citadel and the mosque of Mehemet Ali, with its exquisitely graceful minarets. To the left, and washing the eastern base of the hills, stretched the green and fruitful plain of the Nile ; the great river itself carrying its channel from side to side, and crossed opposite the city by the bridge we had passed over the previous day. Looking across the valley, the horizon towards the west is bounded by the yellow ridge of the desert sands, in front of which, as if to mark the boundary between the region of verdure and that of drear sterility, are planted the Pyramids, in grand procession, headed by the greatest and oldest, those of less stature and of more recent date bringing up the rear throughout a tract of many miles up the river side. Away towards the north might be seen the plain of the Delta, with its green illimitable fields, and frequent groves of palms. From no other spot, perhaps, can the mind become so fully impressed by the fact that to the Nile, and the Nile alone, does Egypt owe all she has of fertility and wealth. Beyond is the desert of sand, a sea-bed without its animate forms, lifeless and waste. As Dean Stanley has well observed, the Nile, as it glides between the Tombs of the Pharaohs, and the City of the Caliphs, is indeed a boundary between two worlds.²

Under the guidance of Dr. Schweinfurth we were able to see the

¹ "Our Inheritance in the Great Pyramid." However much, in this hypercritical age, one may feel inclined to doubt some of the conclusions at which this author has arrived, every one must admire the labour and enthusiasm with which he endeavoured to work out a great problem.

² "Sinai and Palestine," Edition 1873, Introduction, p. xxxiv.

most satisfactory evidence that at a very recent period, and while the shells of the Mediterranean and Red Seas were still unchanged, all the great plain we have been contemplating was submerged to a depth of over 200 feet. At about this level the limestone rock is bored by *Pholades*, and shells now living in the neighbouring seas are to be found imbedded in sand and gravel which then formed the shores; while the coast-line was defined by the cliffs, which rose some 400 feet above the waters. The sand-beds with large *Clypeasters*, which occur south of the Pyramids, indicate the position of this sea-bed on the opposite side of the Nile Valley. How great has been the change since then! But long ere the foundations of the Pyramids were laid, the sea had receded to a level perhaps not very different from that at which it stands to day.¹

On ascending towards the summit of the ridge we visited several enormous caverns sufficiently large to shelter an army, which occur on both sides of the valley, and at an elevation of about 500 feet above the sea. These caverns are hollowed in the limestone rock, and evidently not by human agency. They afford a suitable retreat for the rock pigeons, which we started from their nests. Dr. Schweinfurth considers these to be ancient sea-caves, and if this be so the land has been still further submerged within a very recent period. On the summit of the plateaux we reached one of the entrenchments of the army of Arabi Pasha, and at a short distance further, towards the east, the British station for making observations on the recent transit of Venus. The spot is marked by a block bearing the following inscription:—

CAPTAIN GREEN, R.E., 1883.



Next in interest to the Pyramids we may place the Museum of Egyptian Antiquities at Cairo, a collection of surpassing interest and variety, illustrative of ancient Egyptian art, collected mainly through the instrumentality of Mariette Bey. The museum stands by the banks of the Nile. It unfortunately happened that at the time of our visit the Director, to whom I had a letter of introduction, was absent, and the official catalogue had not then been published,² but with the aid of either "Murray" or "Baediker," and the inscriptions accompanying the objects themselves, the visitor need be at no loss.

In this place I may refer to the Nile oscillations. On the wall of Shepherd's Hotel is to be seen a map, or diagram, upon which is represented the oscillations of the waters for each year as it comes round. Those for the year 1882-3 were as follows:—

¹ To this physical fact in the history of the Nile Valley I shall have occasion to allude further on; and the detailed proof must appear in another place. It is only necessary here to give the general result. When we say that the sea has receded, this is owing to the land having been elevated.

² But has since, as I see by a recent review in the *Times*.



<i>Elevation.</i>				<i>Months.</i>	
Minimum	....	....	....	{ May. June.	
Slight increase	....	....	....	Latter part of June.	
Rapid increase	....	....	....	{ July. Middle of August.	
Slight increase	....	....	....	{ Middle of August. " September.	
Maximum	....	....	....	End of September.	
Slight decrease	....	....	....	Middle of October.	
				{ End of October. November. December.	
Rapid fall	....	....	....	{ January. February.	
				{ March. April.	
Gradual decrease	....	....	....

On Monday, 5th November, our Arabs and camels mustered for inspection in an open space of ground not far from our hotel, and we went out to visit them and to have our first experience of bestriding a camel's back. There were about forty in all--some with saddles for riding, these

being slight and young-looking; the others with nets and ropes for baggage. The men belonged to the Towâra tribe, of whom the head Sheikh Ibn Shedid, resides permanently in Cairo.¹ I liked the faces of the men, which were open and good-humoured, and felt confident we should be perfectly safe under their charge, a confidence not misplaced by subsequent events. The Towâras occupy the whole of the Sinaitic promontory south of the Tih plateau. They are divided into five branches, of which the Szowaleha is the largest; next the Aleygats, then the El-Mezeine, the Ulad Soleiman who live near the town of Tor; and last, the Beni Wassel, a very small branch near the south-east coast.

The Towâras are a peaceable tribe, friendly to travellers, and had no part in the murder of Professor Palmer and Lieutenant Gill. Their Sheikh, on the contrary, was instrumental in bringing four of the culprits to justice, and accompanied Sir C. Warren into the desert to effect their capture.²

The negotiations for our escort had been effected between Messrs. T. Cook & Sons' agent at Cairo and the Abbot of the Monastery of St. Catherine, and by him our men and camels were sent over to Cairo, from their home in the Wâdy Feiran, in order to receive their baggage loads, and to pass inspection; and they had arrived outside the city the evening before we saw them in the space near the hotel. In the course of the day the whole procession with their loads passed in front of our hotel, and afforded a sight probably not very novel to the residents, but to us not only novel, but of considerable interest. The camels upon which we were to ride were bestrode by their respective drivers, then came others with barrels of flour, barrels for water, the tents, five in number, rolled up into the most compact dimensions, boxes of provisions, our camel trunks, crates with live turkeys and poultry, and other matters too numerous to mention in detail. We were not again to see them until our arrival at the landing stage near Ain Musa, on the eastern side of the Gulf of Suez, to which place we intended to proceed by rail and boat.

On the morning of 8th November we left Cairo by rail for Suez, passing by Zagazig and Tel-el-Kebir, where Arabi Pasha had made, a few months previously, his most determined, but ineffectual, stand against the British arms. As far as Zagazig the country is richly cultivated, immense fields of corn, cotton, and sugarcane succeeding each other mile after mile; while the station platforms were piled with great bales of cotton, compressed and bound with iron-straps, for shipment to England and elsewhere. Occasionally the Egyptian ibis, an elegant bird with white

¹ Not by choice, probably, but by constraint, as a hostage for the good behaviour of the tribe.

² It had originally been intended that we should have an escort of the Egyptian Camel Corps, which had been kindly granted by Cheriff Pasha at the request of Captain Kitchener, Major in the Egyptian cavalry, but the proposal was afterwards abandoned for very good reasons; first, it could not accompany us further than Akabah, beyond which station the services of an escort were only expected to be of value; and secondly, we felt there was no necessity, as we had full confidence in the good faith of our convoy.

plumage, and in form somewhat like a small heron, might be seen in flocks amongst the cultivated fields, close to the teams of buffaloes while ploughing; or at other times perched on the backs of the buffaloes themselves, busily engaged in clearing the ticks from the animals, a process which the animals themselves evidently enjoyed.

After leaving Zagazig the country becomes more and more arid and desert-like, till at length, on approaching Tel-el-Kebir, the sands set in as far as the eye can reach on both sides. We noticed the ditch and entrenchments of Arabi's army which were stormed by the British troops under General Lord Wolseley, and a small camp of Egyptians still occupying the ground. We also passed the burial-ground of the British troops who fell on that memorable occasion, prettily planted with shrubs and flowers, which were being carefully tended by gardeners. Tablets to the memory of the officers and soldiers have been placed on the walls of the English church at Cairo.

The route lay along the side of the "Sweetwater Canal," which carries the waters of the Nile to Suez, Ismailia, and Port Saïd. This canal was constructed by the Ship-Canal Company, and it occupies very much the line of the ancient channel intended to connect the waters of the Nile with those of the Red Sea, and beyond the tract influenced and irrigated by its waters all was sandy desert covered by scrub, amongst which the only visible inhabitants were a shepherd and his flock. It was dark when we reached Suez, and on reaching our hotel we learned that the steamship, the "Shannon," had arrived from England, and lay in the Gulf awaiting the arrival of H.R.H. the Duke of Connaught, on his way to India.

Next morning, on ascending to the roof of our hotel, to take a glance at the surrounding country, we were struck by the bold aspect of Jebel Attâkah, which rises in the form of a lofty escarpment along the western shore of the Gulf of Suez a few miles from our position. In form and outline it seemed to bear some resemblance to the ridge of Jebel Mokattam behind Cairo, and to be in some measure, in a geological point of view, representative of it; the strata were, in fact, easily visible from the roof of the hotel. We determined to devote the day to a visit to this fine range, and taking a sail-boat manned by four Arab sailors and a boy we dropped down the Gulf. The wind was light, and sometimes failed us, so that the sailors had recourse to the oars, which they accompanied by a monotonous chant extemporised for the occasion, and, as we supposed, in our honour; as we could distinguish the word "hawajah"¹ not unfrequently. At length, after three hours, we landed on a pier leading up to the quarries which were opened by M. De Lesseps for his buildings at Suez. From the pier we toiled up to the quarries under a burning sun (the temperature in the shade being 91° Fahr.), and were rewarded by finding the limestone rocks crowded with fossil shells, though generally only in the form of casts. Our return was enlivened by a steady breeze which

¹ Hawajah (or gentleman) is the Arabic word applied to Europeans.

sprung up from the north-west, and as we were carried along we were on the look-out for the flying fish, which from time to time leaped out of the water, and after skimming over the crests of the waves for some yards, disappeared. As we neared the harbour the sun went down behind Jebel Attâkah, and soon after, the sky over the hills was all aglow, as if behind was concealed a great city in conflagration; the deep red of the west shading off through purple and roseate hues into the dark grey of the zenith. It is only in the East that such sunsets reward the beholder.

(To be continued.)

LETTER FROM CAPTAIN KITCHENER.

ABBASSIYEH,

13th January, 1884.

You will, I know, have received before this a full account of our proceedings from Professor Hull until we parted—he going to Gaza, and I striking across the desert to Ismailia. Our rate of travelling up the Wâdy Arabah was too fast for survey work. At first, while the valley was narrow, I was able, with Mr. Armstrong, to keep up by working hard, and being out almost every night after dark; but when the valley increased to fifteen miles wide I found it was impossible on camels to survey both sides at the rate we moved. I did all I could, and took up the work again later on the west side. My report will show how the work was done, and if you measure the distances I had to go I think you will find I got over as much ground as a camel would allow. They are bad beasts for surveying. I used to keep mine at a good trot for a bit until he got cross, which he showed by roaring, and then suddenly shutting up all four legs and coming with a thud on the ground, at the same moment springing up again and darting off in an opposite direction. Continued correction caused him to collapse again, and then roll, which was decidedly uncomfortable. I don't think I have ever done such hard work as I had up that Wâdy Arabah from Akabah to the Dead Sea. The result is, however, I think, very satisfactory; I have been able to run a triangulation up the whole way, and join on to the old work by measuring a base at Akabah. I took the levels by vertical angles, and kept up a complete chain of levels throughout. I found Akabah is out of position, being shown too far south on the Admiralty, and I found the south end of the Dead Sea to be terribly out—the Lisan has to be moved about three miles, and the whole shape of the south end altered. You will get full details in my report and plans, which I am preparing to send you as soon as possible.

By going up from the south end of the Dead Sea to Bir-es-Seba, I was able to put in a corner of the map and join on to our old work.

After Bir-es-Seba I considered that the road by El Arish to Egypt was already well known, so by myself, with only four camels and four Arabs, I made my way across to Ismailia, about 200 miles. One of the Arabs had been part of the road fifteen years before ; none of the others knew anything of it, but they were good men from the Egyptian Haiweitats, under a relation of the Sheikh Ibn Shedid. We passed a good many Arabs of the Terabin and Ma'azi tribes, and I was received amongst them as Abdullah Bey, an Egyptian official, thus reviving a name well known and much revered amongst them ; they supposed me to be a relation of the great Sheikh Abdullah. I was everywhere well received, and heard many expressions of the utter disgust the Arabs have for Palmer's murderers. They were also very full of accounts of Sir Charles Warren's pursuit of the murderers, and the energetic steps he took to catch them. My route—for there was no path or road—was a good deal over rolling sand drives, with no water supply. At one time we had a council of war, whether we should go back for water or push on to Ismailia ; but as we had brought as much as we could carry from the last supply I insisted on pushing on, and we reached Ismailia without loss, but at our last gasp for water. The last two days' travelling were the most trying I have ever experienced ; a very strong west wind blew the sand up into our faces, so that the camels would hardly face it. I will not anticipate my report and plans by giving you now a description of the route, but I can certainly say that it is a 200 mile trip I have no wish to traverse again. We only missed our way for a short time once during the whole march, and I was much struck by the wonderful way the Arabs can make their way across difficult country without compass to guide them. I travelled every day from 8 a.m. to 6 p.m. without stopping, and with very little variation. One night we had to travel a good deal after dusk, to make a brackish pool of water, and I very nearly lost the party, as we had to separate to hunt for the water.

There was only one supply of good water after Wâdy Feira, and that was in Wâdy el Arish ; after that we only found one brackish small supply as far as Ismailia.

H. H. KITCHENER.

ON THE RELATIONS OF LAND AND SEA IN THE ISTHMUS OF SUEZ AT THE TIME OF THE EXODUS.

THIS may be the proper place to refer to a suggestion of mine which has excited some interest, namely, that at the time of the Exodus there was a continuous connection of the Mediterranean and the Red Sea.¹ I never intended this to be considered other than a hypothesis towards the solution of a real difficulty which has occurred to all geographers who

¹ The *Times* and *Standard*, 18th February, 1884.

have undertaken to deal with the subject—namely, the determination of the actual position of the passage of the Red Sea by the children of Israel. As far as I am aware, the problem has been dealt with on the supposition that the physical relations of sea and land were, at the time of the Exodus, exactly or nearly as they are at present ; which there is reason to believe is far from having been the case. As Dean Stanley has truly observed, there is only one feature of the scene unchanged and unmistakable, and that is the magnificent mountain of Jebel Atâkah, the “Mountain of Deliverance,” which from the south formed an impassable barrier to the escape of the Israelitish host in that direction, and induced Pharaoh to exclaim, “The wilderness hath shut them in !” This is “the precipitous mountain descending on the sea” referred to by Josephus, which doubtless commanded from afar the scene of the great deliverance wrought by Jehovah for Israel.

It is also impossible to doubt that, according to the narrative, the passage was made somewhere in the neighbourhood of Suez, probably Baal-zephon.¹ Briefly stated, the Israelites, instead of taking a course into Canaan along the coast of the Mediterranean, which would have brought them into collision with their future enemies, the warlike Philistines,² were directed to move southwards from Ramses (or Pi-Ramessu),³ the capital of Egypt under Rameses II, and after a day’s journey they reach Succoth (the place of tents), and on the following day Etham, situated on the edge of the wilderness ; that is, the district lying to the north of the Bitter Lakes, over which the road into Palestine and the east passed. By this road also the nomad tribes from Edom entered the pasture lands with their flocks.⁴ From all this, and the absence of any reference to a natural water channel between Egypt and the east, there can be little doubt that at the time of the Exodus, and long before, there was continuous land across the Isthmus to the *north of the Bitter Lakes*. I therefore wish now to modify the statement which has been made in my name to this extent ; but I hope to be able to show that to the south of that lake the evidence leads to a different conclusion.

From Etham the Israelities “turned” southwards to Pi-hahiroth before Baal-zephon. This locality, as suggested by Dean Stanley, was probably in the vicinity of Ajrûd, the halting-place of the Mecca pilgrims.⁵ It is at this point that the difficulty of reconciling the Bible narrative with physical facts meets us ; for, according to the present position of land and water, there is a direct landway across into the “wilderness of Etham,”

¹ Exodus xiv, 2.

² Exodus xiii, 17.

³ Dr. Brugsch-Bey, “Egypt under the Pharaohs,” edit. 1881, vol. i, p. 230, *et seq.* This author places Ramses (or Pi-Ramses) on Lake Menzaleh, at the entrance to the Tanitic branch of the Nile, and allowing twelve or fifteen miles for a day’s march from Ramses, the Israelities at the end of the second day would have reached a position near Ismailia.

⁴ Brugsch-Bey, *ibid.*, p. 234.

⁵ “Sinai and Palestine,” edit. 1873, p. 66.

by Chalûf, which lies between the Gulf of Suez and the southern end of the Bitter Lakes.¹ It was possible, therefore, for the Israelities to have crossed into Arabia Petræa without the miraculous interposition of God, had the position of sea and land at that period been the same as at present.

It is clear from the narrative that, when the Israelites found that they were being pursued by Pharaoh and his army from the north, they were in a position of extreme perplexity.

Encumbered with a multitude of women and children, flocks and herds, and enfeebled by long servitude, they exclaimed to Moses in bitter irony, "Because there were no graves in Egypt, hast thou taken us away to die in the wilderness?" But it does not appear as if they considered the chief sources of their danger were those above stated. It may be gathered from the narrative, that their danger lay in the nature of the surroundings, and in the physical obstacles to their progress out of Egypt. To the north was the army of Pharaoh; to the south, the desert and mountains; to the west, Egypt, from which they were fleeing; and to the east, the waters of the Red Sea. *Here* was the physical obstacle which (as it seems to me) destroyed their hopes, and drew from them the expression of despair.

Now, let any one compare the present physical conditions of the district north of Suez with those here indicated, and ask himself whether, if they had been at that time as they are now, there would have been cause for this cry of despair, and necessity for a stupendous miracle of deliverance, such as the Bible narrative relates, which impressed itself indelibly on the traditions of the people in whose behalf it was wrought. What was there in the present position of land and sea to have prevented the host of Israel from marching across the hollow, along which the ship canal has been excavated? The canal of Rameses II, which connected the Nile with the Red Sea, entered the Bitter Lake (L. Amarus) at the northern end; but though traces of an ancient canal have been discovered between the southern end of that inland lake and the present port of Suez, it does not follow that these were part of the original and more ancient canal. They may, on the other hand, be referable to the time of the Emperor Trajan, or of that of the Caliphs. All that I wish to contend for is, that there is no sufficient evidence to show that at the time of the Exodus, B.C. 1491, land extended from the head of the Gulf of Suez to the Bitter Lakes. If this be admitted, it is proper for us to inquire, What physical evidence is there in favour of the view that the Red Sea extended northwards of its present position at the period of the Exodus? The reply to this

¹ Most geographers have placed the passage at the Straits of Suez; but if there was land immediately north of this at the head of the Straits, why should the Israelites (ignorant of God's intended miracle) have been filled with dismay on viewing their position, when there was an open way into the wilderness, whither the Egyptians with their chariots could not have followed them (see "Biblical Atlas and Gazetteer," London). Professor Ritter supposes that the place of the passage is to be sought above Suez in the ancient bed of the sea. This is the view in favour of which I hope to show there is evidence based on physical considerations.

question lies in the complete evidence which is to be observed of a recent elevation of the whole land area of this region ; to which is attributable the occurrence of beds of sand and gravel, containing shells, corals, and other marine forms, now existing in the waters of the Gulf of Suez, along either side of that gulf, up to a level of at least 200 feet above its waters. The sea has therefore receded—or, rather, the land has been raised—to this extent during the period of the present forms of marine life. Now a depression of 200 feet below the present level of the land would place under sea-water the whole of Lower Egypt, and large tracts on both sides of the Gulf of Suez ; and, in fact, there can be little doubt that the inland cliffs of the Tih on the one hand, and of Jebel Atâkah and Jebel Abu Derâj on the other, were originally the sea cliffs of the ancient Red Sea ; but this was at a time long antecedent to the period of which we are speaking. The maximum submergence above referred to was much more ancient than the period of history ; but it is not inconceivable that the entire elevation of the land and sea bed into the position we now find them, had not been effected at a time so far back as 3,000 years. Now let us inquire, What extent of submergence would be required in order to bring the waters of the Gulf of Suez as far north as the Bitter Lakes ? Fortunately, the surveys made for the ship canal enable us to answer this question with much exactness. South of the Bitter Lakes, the highest point crossed by the canal was at Chalûf, distant eleven miles from the sea, and this is q. p. 26 feet above the level of its waters. To the north of the Great Bitter Lake there are two elevations—one at Tunum, between this lake and Lake Timsah, which reaches q. p. 25 feet (not very different from the former), and another at El Guisr, between Lakes Timsah and Menzaleh, which reaches a level of from 40 to 60 feet (average 50 feet) above the same datum.¹

In considering the question of changes of level, we may suppose that the vertical movement was slow and gradual ; and also that, within narrow limits, such as those of the Isthmus, the whole area was equally elevated or depressed during the same period. Now, on the supposition that the rise of the land from below the sea, indicated by the raised beaches and shell beds, was still in progress at the time of the Exodus, it will be seen from the above levels that the waters of the gulf would have extended right northwards into the Bitter Lakes, if only 26 feet of elevation had remained to be effected ; while, at the same time, there would have remained unsubmerged a tract of land with a maximum elevation of about 24 feet to the south of Lakes Menzaleh and Ballah ; that is, in the very district where, as appears from history, there existed a land connection between Egypt and the East.

Taking the above physical facts and deductions into consideration, it seems to me in the highest degree probable, that as far back as the age of

¹ Carte de l'Isthme de Suez, dressé sous la direction de la Comp. Univ. du Canal, 1866 ; also Sir W. T. Denison "On the Suez Canal," Proc. Inst. C.E., 1867, quoted in Spon's *Dictionary of Engineering*. I am also indebted to Sir Charles Wilson for a statement of the levels.

Rameses II, and his successor Mineptah II, under whom the Exodus took place,¹ the waters of the "Red Sea" extended northwards up the valley at least as far as the Bitter Lakes, producing a channel from 20 to 30 feet in depth, and perhaps a mile in breadth ; a terrible barrier to the Israelites, and sufficient to induce a cry of despair from the whole multitude. If this view be taken, the Bible narrative (which I assume to be perfectly exact) will be brought into harmony with physical conditions ; and the difficulty which has surrounded the subject will have been, to a great degree, removed.

On the same principles we may suppose that the gradual elevation of the sea-bed and adjoining land has progressed, till at some period—one cannot say how distant—the present relations were established ; but supposing the rise to have gone on till very recent times, or to be still going on, the rate of elevation would be less than one foot in a century.

EDWARD HULL.

M. MASPERO'S WORK IN EGYPT.

THE following letter, addressed to Mr. Scott-Moncrieff by M. Maspero was published in the *Times* of February 23rd.

(*Translation.*)

"BOULAK, *Feb. 2nd*, 1884.

"SIR,—During the four years I have had the honour to direct the Department of Antiquities, I have never ceased to protest against the numerical insufficiency of the staff and the inadequacy of the funds placed at my disposal. Permit me to repeat this complaint once more, though the present state of Egypt affords me but little hope that it will be heard.

"You know how many monuments are found above the surface of the soil between the mouths of the Nile and the Second Cataract ; no country in Europe, not even Italy or Greece, possessing so great a number on so small an extent of territory. Nature, moreover, has divided these monuments into three groups—first, that of the Delta, with Alexandria, San, Sa (Saïs), Bubastis, and the regions mentioned in the Bible ; secondly, that of Egypt proper, with Memphis, the Pyramids, the Faïoum, Beni-Hassan, Tel-el-Amarnah, Siout, Abydos, Denderah, Thebes, Esneh, Edfou, Koum Ombou, and Philæ ; thirdly, that of Nubia, with all the temples of the Ptolemaic epoch in the neighbourhood of Philæ and the wonderful Pharaonic ruins of Wâdy Essaboua, Ibsamboul, and Wâdy Halfa. Of these three groups only one is placed under the care of the Department of Antiquities, and protected as well as may be from the avidity of treasure-seekers and the mischievous folly of tourists—that in Egypt proper. Even this is imperfectly protected, and some localities such as Siout, Tel-el-Amarnah, Bersheh, Beni-Hassan, Illahoun, &c., remain without

¹ Brugsch-Bey, "Egypt under the Pharaohs," edit. 1881, vol. i.

guardians. The Delta and Nubia have no protection, and are left to the mercy of the first who may choose to destroy or rifle the temples. Thus, in Nubia the inhabitants of the village of Dandour have recently caused the wall of the temple to topple down through taking the *sebakh*; at Mansourah a proprietor demolished a superb naos of Nectanebo I in order that he might use the *débris* for the foundations of a bridge; at Zagazig and at Damanhour the treasure-hunters in 1883 discovered dépôts of *bijoux*, which, valued at the weight of the metal, without taking the artistic workmanship into account, were worth over 50,000f. The artistic and archaeological treasures of Egypt are open to pillage throughout two-thirds of the Egyptian territory.

"Observe that here I speak only of the service appointed for the guardianship of the monuments; another part of my functions obliges me to make excavations, to endeavour to increase the number of the monuments deposited in the Boulak Museum, and to discover new documents which may enable us to re-write the ancient history of the Egyptian and Semitic worlds. The funds allotted to the service for the prosecution of excavations are so small that in Europe I am almost ashamed to name the exact figures. They have been diminishing from year to year; they have never exceeded 35,000f. per annum, and have always approached much more nearly 25,000f. With 35,000f. I can still sustain the burden imposed on me, provided that I undertake a great deal personally. The discovery of the Royal mummies at Thebes; the opening of sixteen pyramids, of which some, like that of Mydoun, passed for impregnable; the clearing away of the rubbish begun at Luxor, show what we can do with the miserable means afforded us. But I learn that many, even among Europeans, consider that these few thousand francs are yet too heavy a charge for the Treasury, and decry our labours as entailing a useless expense. I confess I cannot see sense in the accusation. In ordinary times Egypt is visited every year by about 3,000 travellers, drawn there, not by factories, or cotton, or railways, or all that it is customary to call useful and productive, but by the monuments of Arab and Egyptian art. Estimating the expenditure of these travellers at 2,000f. each on an average, there is a sum of four to six millions of francs a year which is left by them in Egypt, and which the country gains entirely. In first deducting from these millions the thousands of francs which the Department of Antiquities requires, Egypt does not incur a useless expense; she has the wisdom to take from the riches which come without trouble to her funds barely sufficient to keep up the artistic and archaeological capital bequeathed to her by antiquity.

"Circumstances are so unfavourable at present that I shall not ask for an augmentation proportionate to the importance of the service: I shall only ask the Government not to diminish the little it gives me. On the other hand, I cannot resign myself to leave two such important provinces as the Delta and Nubia to be pillaged. Already I have endeavoured to engage private individuals to promote the objects we have in view in those parts of the country in which I cannot carry on excavations myself on the Government account. I have favoured the formation of the Egyptian

Exploration Fund, for which M. Naville last year discovered the town of Pithom, and for which Mr. Flinders Petrie is executing some works at Tanis this year. I have concluded arrangements with Messrs. Cook which will enable me to obtain some money from all the travellers that firm conducts through the country. The French Government has put some thousands of francs at our disposal, through the intervention of the École d'Archéologie which it has founded at Cairo. It seems to me that private persons might come to our aid as companies and Governments do, and that subscriptions opened in England and in the other countries of Europe might furnish us with some resources. With so little as it is our fortune to obtain our budget is so restricted that the smallest sums of money will be welcome.

"I leave it to you, Sir, to see if this suggestion can be made to lead to any practical result, and beg to assure you, &c.,

"G. MASPERO."

PILLAR OR GARRISON ?

SIR,—With all due respect to Captain Conder, I do not think my position with regard to 1 Samuel xiii, 23, can be so easily shaken. In Joshua xv, 3, 9, &c., the "boundary line" of the tribes is *the subject* of the narrative, but in the episode of 1 Samuel xiii and xiv there is no hint of a boundary being in question, unless it can be read into the word in dispute.

I cannot go into the Hebrew; but the question is not whether the verb can be employed of some kinds of inanimate objects, but whether such an object as a menhir can be said to have *gone out* or *extended*.

That this distinction exists may be shown in the English words, by substituting for "garrison" the words proposed by C. R. C. as the correct rendering of מצב. We at once recognise that we could not properly say "the pillar of the Philistines went out to the passage of Michmash," or "the menhir of the Philistines extended to the passage of Michmash." You could indeed say the boundary of the Philistines went out (or extended), &c., because in the subject of a "boundary" there is involved the active principle of extension in length of circuit, or expansion of an area; but I do not gather that Matzab can signify a boundary in this sense, but only a boundary *mark* set up to signify the precise position of the boundary at a particular place.

Following verses 5 and 6 of chapter xiii, the latter part of the chapter really described a more extended irruption of the Philistines than that prior to Jonathan's exploit, and verse 23 naturally follows on verse 16 as describing a military foray.

If it had signified a *lessening* of the extent of Philistine territory consequent on Jonathan's prowess, ought it not to have been mentioned before verse 5, and to have been worded "and the *Matzab* of the Philistines went *back* to the passage of Michmash?"

The word clearly can be rendered "garrison" or "outpost," and if this rendering is kept there is no *difficulty* about the whole narrative. Besides what does C. R. C. make of 2 Samuel xxiii, 14?

Before I close, I wish to point out the following errata on page 244, *Quarterly Statement*, 1883:—Line 7, נציב should be נציב; line 12, eruption should be irruption; line 21, sixteen should be fourteen.

Yours obediently,

H. B. S. W.

THE NAMELESS CITY.

To the Editor of the Palestine Exploration Fund Quarterly Statement.

SIR,

May I be allowed to make one or two comments on the remarks of C. R. C. on pages 183-4 of the *Quarterly Statement* for 1883?

First, I would ask how Kirjath-Jearim can possibly be the city where Saul met Samuel, in the face of the statements in 1 Samuel ix, 27, and x, 1, 2, showing that it was *immediately* after leaving Samuel that Saul was to meet the "two men by Rachel's sepulchre?" If we are not to understand that Rachel's sepulchre was *near* to the "end of the city" where Saul was anointed, then I wonder that C. R. C. does not accept the view of the Arabic Commentary I quoted in *Quarterly Statement*, 1884, page 53.

I cannot see, however, that the expression "end of the city" has any special connection with Kirjath-Jearim.

Seeing that the Hebrew word here used for "the end" is used of the "end of the rod" with which Jonathan tasted the honey (1 Sam. xiv, 27, 43), of the "end of the conduit" where Isaiah was told to meet Ahaz (Isa. vii, 3), and again in 2 Samuel xxiv, 8, respecting the "end of nine months and twenty days" in which Joab was occupied in taking the number of the people, to say nothing of the "end" of Jordan, of the valley of giants (Josh. xv, 5, 8), and of the mountain (Josh. xviii, 16), it must be manifest that it simply means the "end," the furthest extremity only.

May I ask also why C. R. C. explains Aretz Sha'lim as being=land of caverns?

Is it not more reasonable to connect it with Shual=Jackal, in the "land of Shual" (1 Sam. xiii, 17), and perhaps with "Hazar-Shual?" Dr. Young renders it "jackals," and Gesenius suggests "region of foxes."

Yours truly,

H. B. S. W.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

WE beg readers and subscribers to read the Report of the Executive Committee for the past year, and the proceedings of the meeting of General Committee, in order to learn what has been the real nature and extent of our operations during the twelve months ending June 30th, and what are our prospects of work for the future.

An abstract of the most important scientific results of Professor Hull's survey has been drawn up by him for the Committee, and will be found in its place on page 160. The Professor is now engaged upon the Geological Memoirs of his journey, and upon a popular account, the first or opening chapter of which was published in the April *Quarterly Statement*. The latter will be issued as a separate volume in October next; the publication of the former will be arranged as soon as possible after it is ready.

Major Kitchener's report on the geological and topographical results of the expedition will be published in the October number of the *Quarterly Statement*. The map has now been completed by Mr. Armstrong from the observations and sketches, and is ready for publication. We may fairly congratulate ourselves on the result of the year's work, which has added to our knowledge, besides a most important study of Palestinian geology, a Survey of the whole of the Wâdy Arabah.

The work of the future, as will be found explained in the Report of the Executive Committee, will depend partly on getting the Sultan's Firman to continue the Survey of Eastern Palestine, and partly on *the seizure of opportunities as they occur*. Thus it is hoped in the next winter that some work similar to that of last year may be successfully carried through.

The "Survey of Western Palestine" is at length completed, after four years of work. No more magnificent monument of similar enterprise has ever been published in any work which has added more to the elucidation of the Bible, the purpose for which it was undertaken. It consists, as now completed, (1) of the Maps of Western Palestine, from the Surveys executed by Captains

Conder and Kitchener, 1871-1878; (2) of three volumes of *Memoirs*, illustrated by many hundreds of drawings, plans, sections, &c., executed by the officers for this work and never before published; (3) one volume of *Name Lists*, containing all the modern names collected during the Survey; (4) one volume on the *Flora and Fauna of Palestine*, by Canon Tristram; (5) one volume on *Jerusalem*, by Colonel Sir Charles Warren, K.C.M.G., F.R.S., and Captain Conder, R.E.; and (6) a portfolio containing 50 sheets of drawings, prepared by Sir Charles Warren from his excavations, giving for the first time a complete representation of all his discoveries. The copies which remain will be sent out in order of application as they are subscribed, and *no more copies will be printed* except of the last two.

The "*Flora and Fauna*," by the Rev. Canon Tristram, consists of one volume (of 450 pages), with twenty full-page illustrations, of which thirteen are coloured by hand. The Preface of the geographical and geological relations of the *Flora and Fauna* endeavours to account for the anomalies by the geological history of the country, as written chiefly in the Terraces of the Jordan Valley. The volume contains a complete catalogue of all the vertebrate Fauna, including the fresh-water fishes, the most singular portion of the Palestine Fauna, the terrestrial and fluviatile mollusca, the phanerogamic plants, and the ferns. The Hebrew names, so far as known (*i.e.*, every Hebrew name found in the Bible), and the vernacular Arabic names are given; the authority and original description of every species is given in reference, and the geographical area of each species, which in every case has been carefully worked out. Short accounts are given of the most interesting and conspicuous species, and the fishes of the Sea of Galilee are very fully described. It has been resolved to allow this volume to be subscribed for separately at the price of three guineas.

The *Jerusalem* book, by Colonel Sir Charles Warren, K.C.M.G., and Captain Conder, R.E., consists of one volume, uniform with the preceding, of 542 pages. The following is the Table of Contents:—

Chronological Synopsis of the History of Jerusalem; Architectural History of Jerusalem; History of Jerusalem Exploration; Statement of the principal controversies; Explorations in Jerusalem; Excavation round the Noble Sanctuary; Tanks inside the Sanctuary; Excavations on Ophel; Excavations in the City; Explorations since 1869; Work of M. Clermont-Ganneau in the City; Environs of Jerusalem; the Siloam Inscription; Ancient Inscriptions in Jerusalem; the Holy Sepulchre. To these is added an Appendix on Philistia; Askalon; Jidy; Warren's Journey east of the Jordan; the Jordan Valley; Saida; the Temple of Coele Syria; the Mounds of Jericho; the Lebanon; and the pottery and glass found in the excavations. A number of illustrations will be found in the text, but the volume is actually illustrated by the great portfolio, with fifty sheets of drawings which accompanies it. In them will be found, published in their entirety for the first time, the whole of Sir Charles Warren's work, with contributions from Captain Conder. The volume and portfolio may also be had separately at the price of five guineas.

A very important resolution has been passed by the Executive, and approved by the General Committee. It is to the effect that, in order to meet the wishes

of many subscribers, we shall replace our reduced Maps of Western Palestine and our Old and New Testament Maps by others giving both Eastern and Western Palestine, the present part including what has already been done, and showing what is known approximately of the rest. Sir Charles Wilson will superintend this work. When it is ready, those subscribers who wish will be allowed to exchange the maps already in their possession for the new ones, on payment of the small difference in their cost and the carriage. Mr. Armstrong is now engaged upon drawing these maps. It is not likely that they will be completed before the end of the year.

We have received from Mr. Laurence Oliphant some notes on a journey recently undertaken by him into Eastern Palestine. They were accompanied by geographical notes made by Mr. Sehumacher. These include the heights of eighteen ruins, cottages, and hill-tops; the collection of some thirty names; the correct course of the Yarmuk and the Rukad, with sections across the former river. At Tsil, on the way to Damascus, it is stated that there are a great many dolmens, of which one was sketched, and is figured at page 171. It will be observed that it is a very fine and perfect example. It is remarkable that there should be a great group in the north of this country, perhaps corresponding to the group found and planned by Captain Conder in 1882.

Among the "Special Surveys" made during the survey of Western Palestine is one, fortunately very complete, of the ruins of Cæsarea, which will be found in Vol. II of the Memoirs. The following notes, extracted from a recent letter published in the *St. James's Gazette* (June 27, 1884), curiously illustrate the importance and rapidly increasing value of these plans, made before they were swept away by populations which have no other than a superstitious interest in old monuments. It must be remembered that every improvement or alteration in the condition of the country means the destruction of more ancient monuments. The possessors of Captain Conder's Memoirs will before long hold in their hands a representation which can never be made again of other curious and interesting ruins, besides those of Cæsarea. We may remark, in illustration, that a precisely similar process of destruction is going on at Ammân, where the ruins have also been specially surveyed by the same officer.

"The principal inducement to tourists in Palestine to take the coast route which leads from Jaffa to Carmel and Acre, lies in the fact that it affords them an opportunity of visiting the ruins of Cæsarea, which are mainly of two periods—first, the Roman town, with walls, theatre, hippodrome, mole, temple, and aqueducts; second, the Crusading town, with moats, castle, cathedral, northern church, and harbour: the whole forming a collection of remains which for importance, extent, and interest are unsurpassed by anything in the Holy Land west of the Jordan. Those who have already visited these ruins may consider themselves fortunate; for they are at present undergoing a process of transformation and disintegration which bids fair to destroy, or at all events to conceal, the last vestiges of what was once the most important centre of Roman civilization on this coast. The circumstances under which this change is taking place are sufficiently curious—from an historical and political point of view, as being the direct result of the late Russo-Turkish War—to be brought to the notice of

your readers ; while they form a singular commentary on the ignorance which prevailed in England with regard to the true character of the events which led to that war.

“ When those disturbances occurred in Bosnia and Herzegovina which led first to Servian and then to Russian intervention, the popular notion was that the population of those provinces was Christian, and that the cause of the insurrection was the persecution of the inhabitants by the Turkish Government. There would be some difficulty in reconciling this theory with what is now going on at Cæsarea. These ruins have been presented as their future home to Moslem emigrants from Bosnia and Herzegovina, who are all Slavs, some of whom do not know a word of Turkish, and who have fled for refuge to the sheltering wing of the Sultan from the Christian rule of Austria in the provinces that were ceded to her by the Treaty of Berlin. They are the *avant-garde* of a large influx which is soon to follow ; and I was astonished on visiting their new colony a few days ago at the display of energy and wealth which it presented. A broad street has been laid out, which passes directly over the remains of the Roman temple built by Herod in honour of Cæsar and of Rome—the finely dressed white stone being turned to good account by the colonists)—and over the Crusader’s cathedral, the foundations and walls of which also furnish splendid building material. The masonry is brown limestone beautifully squared ; the stones are from 9 inches to 2 feet long, and from 6 to 8 inches high, and have the dressing common to mediæval churches. This street extends in a northerly direction from the south gate of the Crusading fortress, and will probably be ultimately prolonged to the north tower. Already within the last five months over twenty handsome stone houses have been built upon it, two of them three stories in height, all surrounded by court-yards, in which the harems of the colonists are jealously secluded ; indeed, I did not see one female immigrant. The Slavs are, in fact, far more rigid in their Moslem observances than the Arabs by whom they are surrounded. Many new houses were in process of erection, the carpenters and masons all being supplied by Haifa, as Cæsarea is in the *caimakamlik* of that name. As I had visited the towns of Mostar and Cognitza in Herzegovina, from the neighbourhood of which the colonists had come, I easily won their sympathies by talking to them of their country, and listening to the grievancees which induced them to dispose of their property and transfer themselves to Palestine. They were aristocrats in their own country, and they had been unable any longer to submit to the humiliation of being treated on an equality with the peasantry of their own race, who, being Christians, were—from their point of view—unduly favoured by the Government ; and who, no doubt, availed themselves of the changed circumstances to be revenged upon their former masters. One of the colonists, who had opened a little store, placed at my disposal an unfinished house which he was building. He announced his intention of opening an hotel, which will be an immense convenience as a half-way house for travellers from Jaffa to Haifa, the more especially as it is possible now to drive the whole distance in a carriage. Indeed, now that there is a good hotel at Haifa, there is no reason why travellers, instead of riding and tenting it from Jerusalem to Nazareth, should not drive the whole distance between those places by way of Jaffa, Cæsarea, and Haifa.

“ These Slav colonists have a fine tract of land, part of the Plain of Sharon, assigned to them for cultivation, adjoining the section granted to the Circassian

colonists, whose village is within a few miles of Cæsarea. As these Circassians are emigrants from Bulgaria, it seems a singular destiny that they should again have Slav neighbours in Palestine; while scarce ten miles distant, in curious contrast with these two races, is the Jewish colony of Zimmarin, which, in spite of all the difficulties with which it has had to contend, seems likely to turn out a success. Meantime it is satisfactory to find that a magnificent tract of fertile country, which has hitherto been abandoned to desolation and nomads, is now likely to be brought into cultivation by an increase of the agricultural population, no matter of what race; and that the port upon which Herod the Great expended so much labour and money, although fallen into disrepair, will again be put to use. The northern side of this harbour is composed of a mole, consisting of some sixty or seventy prostrate columns; the southern of a rocky promontory, on which was probably built the "Drusus," or principal tower of the great wall of Herod. It is now a confused mass of Crusading masonry. For here was built the donjon-keep; and among its ruins the Slavs, with an eye to the amenities of life, are now erecting a café and place of entertainment, which, perched over the sea between Roman columns and Crusaders' buttresses, will catch every breeze and form an agreeable resort. Most of the new houses are built on the foundations of old ones, thus forming a sixth architectural period. For Herod built on the site of the ancient town known as Strato's Tower; the splendid city which he called Cæsarea was followed by structures raised under the Byzantine rule; upon the ruins of this the Mohammedans built; next came the time of the Crusaders; and the final destruction of the place by Bibars took place in A.D. 1265. In the course of their excavations for building-stone the Slavs have found a good many coins of various periods, some statuettes, and other antiquities; but, so far as I could discover, nothing has been brought to light of any great value, and the owners set an exorbitant price on what they have found. As, however, the new town is only in its infancy, and there is no saying what discoveries may yet be made.

"O."

The income of the Society, from March 13th to June 26th inclusive, was £738 2s. 8d. On June 30th the balance in the Banks was £311 8s. 7d.

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

MEETING OF GENERAL COMMITTEE.

JUNE 19TH, 1884.

THE Chair was taken by Mr. JAMES GLAISHER.

The Secretary read the minutes of the last General Meeting, which were confirmed.

The Secretary then read the Annual Report of the Executive Committee, as follows :—

REPORT OF THE EXECUTIVE COMMITTEE.

MY LORDS AND GENTLEMEN,

Your Committee, elected at the last General Meeting of June 19th, 1883, have, on resigning office, to render an account of their administration during the past year.

I. The Committee have held twenty-one meetings during the year.

II. It has been found impossible to carry on the survey of Eastern Palestine for want of the Sultan's Firman. The portion of the survey already accomplished has been engraved on the reduced scale, and issued to subscribers. Captain Conder has completed and handed in his Memoirs of the 500 miles surveyed. These are remarkably full and detailed, and are accompanied by hundreds of plans and drawings. The Committee have still under consideration the question, whether these should be published at once, or whether they should wait for the continuation of the work.

III. The issue of the Society's great work, "The Survey of Western Palestine," is at length completed. The last two volumes, that on "Jerusalem," by Sir Charles Warren and Captain Conder, and that on the "Flora and Fauna," by Canon Tristram, are now in course of distribution to subscribers. The Jerusalem volume is accompanied by a portfolio of plates, drawings, and sketches. These two volumes will not be limited in their issue. The Committee think that the Society may be justly gratified by the completion of this magnificent work, which, with the accurate and beautiful maps furnished by the survey of Captains Conder and Kitchener, is by far the most important and valuable contribution ever made to the elucidation of the Bible from the geographical, archæological, and topographical point of view. The maps have been executed in the best style, and therefore at a very considerable cost. The Committee think it due to Mr. Stanford, their engraver, to record their sense of the beauty and excellence of the work put into the engraving of their reduced maps.

IV. There have been many expressions of opinion that the maps, which now show only the western side of the Jordan, should be extended so as to

give the eastern side also, even though that part is yet imperfectly known. It has therefore been resolved that all the existing information on this part of the country shall be laid on sheets the same size as those of the reduced map for the engraver. Mr. Armstrong, who has been in the Society's service since the year 1871, is now engaged in doing this. As soon as he has completed the work it will be sent to the engraver.

In order to make these maps more generally useful, the Old and New Testament names, boundaries, &c., will be laid down on them in different colour. Sir Charles Wilson has kindly undertaken to superintend this part of the work ; when it is completed, those subscribers who wish will be allowed to exchange the Bible maps they have already obtained at the office for the new ones, on payment of the small difference in the cost of the two maps.

V. In October of last year the Committee published, through Messrs. Bentley & Son, Captain Conder's new book on his Eastern travels, entitled "Heth and Moab." The result, though not yet so satisfactory as in the case of the preceding work by the same author, has left a balance on the right side in our hands.

VI. The exploration work of the year has been of a very satisfactory and valuable kind. The Committee announced at their last General Meeting that they hoped to organise, and send out in the autumn, an expedition which should be mainly devoted to geological research. This expedition has been despatched, and has accomplished the work entrusted to its leader, Professor Edward Hull, F.R.S., Director of the Geological Survey of Ireland. He was accompanied by Captain Kitchener and by Mr. George Armstrong. Professor Hull also took with him his son, Dr. Gordon Hull, and the party was also strengthened by the addition of two volunteers, Mr. Hart, who was assisted by a grant from the Royal Irish Academy for botanical purposes, and Mr. Reginald Lawrence. They left England on 10th of October last year, and returned on the 12th of February, after a journey which occupied four months.

VII. As regards the results of the expedition, they are twofold. First, *Geological*. An analysis of Professor Hull's discoveries has been placed in the hands of the Committee, and will be published in the next number of the *Quarterly Statement*. He has traced the ancient margin of the Gulfs of Suez and Akabah to the height of 200 feet above their present level, so that the whole country has been submerged to that extent, and has been gradually rising. As regards the Dead Sea, he has discovered that it formerly stood at an elevation of 1,400 feet above its present level ; that is to say, 150 feet above the level of the Mediterranean. The history of this gradually lowering of the waters will form a special feature in Professor Hull's forthcoming report. He has also found evidences of a chain of ancient lakes in the Sinaitic district, and of another chain in the centre of the Wâdy Arabah, not far from the watershed. The great line of feature of the Wâdy Arabah and the Jordan Valley has been traced to a distance of more than a hundred miles. The materials for working out a complete theory of the origin of this remarkable depression are now

available. They are found to differ in many details from the one furnished by Lartet. The terraces of the Jordan have been examined, the most important one being 600 feet above the present surface of the Dead Sea. The relation of the terraces to the surrounding hills and valleys shows that these features had already been formed before the waters had reached their former level. Sections have been carried east and west across the Arabah and the Jordan Valley. Two traverses of Palestine have also been made from the Mediterranean to the Jordan.

Dr. Gordon Hull has taken more than a hundred photographs, chiefly of places never before figured.

Next, *the Geographical results*. Major Kitchener has made a survey, which is lying on the table, of the whole of the Wâdy Arabah, from Akabah to the Dead Sea; he found traces of an old city about a mile north-east of the town of Akabah; another ruined city on the east of the wâdy, six miles north of Feidan, with many indications of former buildings, terraces, and irrigation works. He visited Petra and heard many rumours and reports of ruins said to lie on the east of the hills in the country of Edom. He has given the Committee a report on his work, which will also be published in the *Quarterly Statement*.

As regards exploration, therefore, this year has been fruitful of valuable work. For future work the Committee must be mainly guided by circumstances. Until the Sultan grants the Firman it is useless to think of continuing the survey of Eastern Paléstine. It is therefore proposed to continue the work from time to time as opportunities offer, by means of such special expeditions as those of Professor Hull, or by the informal work of private parties and travellers, the results of which will be published from time to time as they arrive.

VIII. The following is the Balance Sheet of the year 1883:—

[illegible]

It will thus be seen that the Committee spent during the year the sum of £3,209 11s. 3d., of which £509 5s. 5d. was expended in management, or including postage £623 1s. 8d., which is not quite 20 per cent. of the whole. The expenditure of the year 1884, up to the present date, has been £3,121, of which £1,830, or 59 per cent., has been spent in exploration, £833, or 27 per cent., on Maps and Memoirs, £130, or 4 per cent., on printers, and £328, or 11 per cent., in management.

The maps and Memoirs up to the present have cost the Society about £6,000. They have realised rather more than that amount. There is about £2,000 still to be paid on this account ; and when all the subscriptions to the "Survey of Western Palestine" have been paid, and the copies still on hand subscribed for, there will remain a considerable surplus, but it is not possible at the present moment to estimate the exact sum.

IX. Papers have appeared in the *Quarterly Statement* since last June on the Geology of Palestine, by Professor Huddleston ; on various topographical and archaeological points, by Captain Conder, the Rev. W. F. Birch, the Rev. Pickering Clarke, the Rev. H. G. Tomkins, and others ; on the Shapira Manuscripts, by the Rev. Dr. Ginsburg, M. Clermont-Ganneau, and Captain Conder ; on the Relation of Land and Sea in the Isthmus of Suez, by Professor Hull ; on Mr. Holland's Last Journey, by Sir Charles Wilson ; on the Khurbets of Carmel, by Mr. Laurence Oliphant ; and on Inscriptions in Palestine, by M. Clermont-Ganneau. To all these gentlemen the Committee render their best thanks.

X. The Committee have, lastly, to express their best thanks to the Local Secretaries, who are active in spreading abroad a knowledge of their work ; and to all their subscribers and donors.

The Rev. Dr. WILLIAM WRIGHT : Mr. Chairman, My Lords and Gentlemen, I have much pleasure in proposing that the Report just submitted be adopted, printed, and circulated. The different items referred to show that the past year has been one of considerable activity. You have done all you were able to do, though not all you desired to do. In your publications, and in your explorations, you have largely added to our knowledge of the Holy Land during the year ; and though in some of your efforts you may not have attained to certainty, you have certainly made advances towards certainty, and you have stimulated curiosity, and mental activity, and a great desire to know more, and to explore further, and deeper, on lines which you have indicated. You are still, I regret to see, hampered by the groundless fears of the Sultan. If any man can remove obstructions out of the way, Lord Dufferin can. I know personally that Lord Dufferin succeeded last year in securing results in Syria which seemed impossible. The Sultan could do no more popular act than permit those who wish him no ill to explore thoroughly and make a good map of those sacred and historic lands of which he is now the guardian. And it is certainly not in his interest that his acts should only drive earnest scholars to long for the time when the country, now closed and barred by ignorant, blind, weak fanaticism, shall be opened to all under a more enlightened ruler. I trust

that Lord Dufferin will continue to urge on the Sultan, in his own interest, as well as in the interest of geographical science, to remove all restrictions out of the way of a thorough survey of Syria and Palestine. Sir, I have seen your work in progress, and I know something of the results attained. I have had the pleasure of seeing your men hard at work on the survey, in the face of difficulties, and I have also seen them hard at work in filling in details during what was supposed to be their holidays at Bludan and elsewhere. I have just recently been associated with some of your best men, in the preparation of maps for the British and Foreign Bible Society ; and it is only by going through the work done that one can form any idea of the vast amount of material for the future student which your explorers have placed at the disposal of Bible students. You will be pleased to hear that the corrected proofs of the set of the Bible Society's maps containing your own work, so far as is possible on our small scale, are now in the hands of Mr. Stanford, and as the Society's home circulation last year amounted to over one million and a half copies of the Scriptures, you may form an idea of the wide circulation of the knowledge of the Holy Land made accessible by your Society. But the maps will also appear in the Italian, French, German, Telugu, Chinese, and other foreign versions of the Society. And as the Society's versions now reach a total of somewhat over 250, the information gathered by your agents will be more extensively circulated than could ever have been dreamed of by the founders of the Palestine Exploration Fund. Let me urge you not to slacken energy in this work, which is for all the world, and for all time. I long for the day when your work shall go on east of the Jordan. Rich treasures await you in the Hauran, and among what have been called the "giant cities of Bashan." You have done good work in giving us a true map for the west of the Jordan, but a less explored and a more fertile field awaits you east of the Jordan, not to speak of the south country, Edom and Moab. I have much pleasure in commending your work, and in moving the adoption of the resolution which I have submitted.

MR. CYRIL GRAHAM: I beg, Sir, to second the resolution of Dr. William Wright. I have long desired that this important survey may be extended to cover the Land of Bashan, and even further east. In this map, which I drew up from the notes of my own journeys in the year 1858, I was able to lay down a great many places and names not previously known. At the same time the journey of a single traveller can never do such map work for a country as a party of surveyors accomplish. The country is not too far east for Biblical limits ; for instance, in Umm el Jamul we recognise Beth-gamul. And there are certain periods in the year when it may be safely and easily traversed. I have only to express my hope that the hoped-for Firman may speedily be granted, and the party again in the field. Meantime, the exploration work of the year shows what may be done in seizing opportunities and getting the right men to work.

The resolution was carried unanimously.

Rev. W. F. BIRCH : I beg to propose the re-election, for the ensuing twelve months, of the Chairman and the Executive Committee. I am quite sure, as a member of the General Committee, an Honorary Local Secretary, and one who takes the greatest interest in the welfare and success of the Society, that we are in very good hands. The Report of the year proves that the work is being followed up with as much vigour and activity as is possible.

The Rev. Dr. LÖWY, in seconding the resolution, called attention to a recent decree by the Porte that no visitors to Palestine should remain there for more than thirty days without special permission.

The resolution was carried unanimously.

The Rev. Dr. GINSBURG : Mr. Chairman, I have a list of gentlemen in my hands whom I beg to propose for election in the list of General Committee. They have all shown that active interest in all belonging to the Holy Land which is the one qualification required to make a man eligible for our General Committee. These names are—

Lord Rollo.

Sir Richard Temple.

Sir William Muir.

General Charles Gordon, R.E.

Professor Hudleston.

Professor Hull.

Mr. George Burns.

Mr. John Robinson, of Westwood Hall, Leeds.

Mr. W. C. Jones, of Daresbury, Warrington.

Mr. A. H. Heywood.

Rev. Professor Milligan.

Mr. Henry Lee, M.P.

Mr. H. S. Perry, of Monksbourne, Cork.

Mr. F. W. Grafton, M.P.

Rev. F. W. Greeny.

Rev. H. G. Tomkins.

Mr. W. H. Houldsworth, M.P.

Mr. J. H. Shorthouse.

Rev. Prof. H. A. Hort, D.D.

Rev. F. E. Wigram.

Mr. VAUX seconded the resolution, which was carried unanimously.

The Rev. W. F. BIRCH : Mr. Chairman and Gentlemen, We have now reached an epoch in the history of this Society. The two newly issued volumes and the plans lying on the table conclude the great work of the "Survey of Western Palestine," begun in 1872. The portion of Captain Conder's map before us, containing 550 square miles, is the firstfruits of the eastern survey ; now unhappily stopped by the withholding of a Firman.

Even under this discouragement, previous speakers are radiant with hope that the survey will yet be extended southwards into the desert of Et Tih and eastwards into the far Hauran. But what of the centre of interest in the Holy Land? My thoughts turn always to Jerusalem. Is there not work there? Colonel Warren's beautiful plans show us much that was once unknown; but at many important points his work was cut short, so that what is known only makes me the more desirous to know more. I ask, is it not time, after an interval of fifteen years, once more to resume excavations at Jerusalem? Shall we be content with presenting to the Bible-loving people of England a correct map of Palestine, and then own that we cannot give them a true plan of Biblical Jerusalem? One says Zion was here, another there; is this always so to be? The Bible arguments seem to me to demonstrate that the City of David was on the eastern hill south of the Temple, but almost all authorities are in favour of some other position, and nothing but excavation will ever settle this debated point. I understand that Colonel Warren thinks that there would be no difficulty in excavating on Ophel, away from the walls of the present city. Why should the Turk object to Englishmen paying for the privilege of digging in the gardens down towards Siloam? The money spent would be so much gain to the poor fellahin. I am convinced that between the Virgin's Fount and Siloam there are remains of the deepest interest connected with the City of David. I would hope, then, that the day is not far distant when the long-lost catacombs of David and other kings of Zion will once more be trodden by those who take pleasure in her stones. As to the question of expense, I believe the necessary funds would soon be forthcoming, since I am satisfied that many supporters of the Palestine Exploration Fund would rejoice to hear that excavation work at Jerusalem was once more to be taken in hand. I have much pleasure in proposing the following resolution:—"That the Executive Committee be requested to consider the question of resuming excavation outside Jerusalem on the earliest opportunity."

Sir CHARLES WARREN: I have great pleasure in seconding Mr. Birch's resolution—the more, perhaps, because we do not always take the same view on the sacred sites of the City. There are many places about and around, perhaps within the city, where excavations might be conducted at small cost, and without danger of interference.

The resolution was carried.

The CHAIRMAN: My Lords and Gentlemen, We have now, as Mr. Birch remarked, reached an epoch in our work. On the table before us lie the volumes, the maps, and the drawings, summed up generally under the title of the "Survey of Western Palestine," which represent the great bulk of our labours since the work of the Society began. We have surveyed all that part of the Holy Land, from Dan to Beersheba, which lies on the west of the Jordan—there are our maps. We have planned, drawn, measured, and photographed nearly every ruin in the country; we have

recovered the old Jewish tombs, and are now enabled to classify and to date them ; we have written down the names of the modern villages and ruins ; we have found the remains of the synagogues and enabled the world to restore the synagogue of Capernaum—there are the *Memoirs* ; and with them we have published the hundreds of drawings executed for us by Captain Conder and Captain Kitchener ; we have, thanks to my friend Canon Tristram, who is never weary of doing something more for the Holy Land, given to the world this truly magnificent book, with its beautiful illustrations, on the Flora and Fauna of the country. We cannot too much congratulate ourselves, that is, our Society, nor can we sufficiently thank Canon Tristram, for the production of a book so admirable and so worthy of the subject. There is so much special interest in the Holy Land attached to its Natural History that it was absolutely necessary to supplement the survey by such a work as this, which could only be thoroughly taken in hand by such a specialist as Canon Tristram. It contains facts, otherwise unattainable, bearing on the questions of the distribution and modification of species. No other country affords so many opportunities for illustrating these questions. We have also in this volume, the last of a splendid series, produced a complete record of all that has been done in Jerusalem since the Ordnance Survey of the city was executed for the world by our friend Sir Charles Wilson in 1865. This book contains the complete and exact account of all Warren's work in the years 1867 to 1870. It also includes a paper on the Architecture of Jerusalem, and an account of the various work done in the city by Captain Conder, M. Clermont-Ganneau, Herr Schick, Herr Guthe, and others. We have to thank Captain Conder, whose name we are all glad to see on the title-page, for his hearty co-operation with Sir Charles Warren. I am sure we are rejoiced to see Captain Conder, who has done so much for the Society, increasing our obligations to him. Lastly, in this great portfolio, with its fifty plates, are figured the discoveries made by Warren. If it be asked why the plates have not been published before, we should have to give the history of Sir Charles Warren's busy and active life since he left Jerusalem. But at this point in our own work, and with these volumes in our hands, I think we should take the opportunity to pass a vote of our warmest thanks to Sir Charles Warren. I am happy to announce that, to the many honours he has won, the Royal Society has recently added one more. I am sure that he is as proud of being a Fellow of that noble Society as he is of wearing the Collar and Star of a Knight Commander of the most distinguished Order of St. Michael and St. George.

LORD EUSTACE CECIL : I am happy, Mr. Chairman, in the opportunity of seconding this vote of thanks. I can only add to your remarks that, though we shall never forget the work done at Jerusalem, we must also remember the work done by Sir Charles during the Zulu War, as Governor of Griqualand, in the region of mathematical science, and in the hunting down of Professor Palmer's murderers. I think, Sir, the Society singularly fortunate in its officers, but especially so in the case of Sir Charles Warren.

Sir CHARLES WARREN, in replying to the vote of thanks accorded to him, said : It has long been a dream with me that these plans should be published, and I am heartily rejoiced to find that sufficient funds have at last been found to enable this to be accomplished, for I have felt certain that as soon as they are in the hands of the public fresh interest will be excited in the topography of Jerusalem, and there will be a renewed desire to excavate there. Of course these plans can only be taken as an earnest of what is to be discovered in the future ; we were obliged to break off in the middle of our work, but we had already accomplished one great section of our enterprise. We had obtained a fairly correct contoured plan of the ancient Jerusalem, and an accurate delineation of the ancient Temple wall. We had commenced quite in the dark as to the relative value of the conflicting theories, and have emerged with so much fresh knowledge that all the old theories have to be modified or abandoned. When the Sultan's Firman expired in 1870, and we were compelled to desist from excavating, I had already elaborated a project for a trigonometrical survey of Palestine, and pointed out that the original design for a mere reconnaissance was not applicable for the work in hand ; I pointed out also that while the objects underground would keep a few years longer, the march of civilisation was rapidly erasing all records of the past above ground. The ancient ruins were being burnt into lime, the old names were giving way to modern appellations, and the records of the past were disappearing : it was necessary at once to proceed with the trigonometrical survey of Palestine and to leave Jerusalem. This work has been completed most successfully through the industry and perseverance of Captain Conder and his comrades, and the time appears to have arrived when we may again consider the question of excavating about Jerusalem. It would be expensive work digging near the inhabited portion, but happily there is the Hill of Ophel, on which, as has been stated, excavation may be made at a comparatively small expense. My friend the Rev. W. F. Birch, who now sits beside me, insists that here is Mount Zion, and is about to attack with a violent hand the position I have assigned to that ancient stronghold. Why not spend a small sum in excavating on Ophel and ascertaining whether he be right or not ? There is much to be said on all sides of the question. I am sure that great interest would be attached to this work. There is a large section of the public interested in Palestine generally, but I think the feeling is more intensely centred in the Holy City.

After a vote of thanks to the Chairman, the Committee adjourned.

ABSTRACT OF OBSERVATIONS OBTAINED BY THE SCIENTIFIC EXPEDITION SENT OUT TO ARABIA PETRÆA AND WESTERN PALESTINE BY THE COMMITTEE OF THE PALESTINE EXPLORATION FUND IN 1883.

BY PROFESSOR HULL, LL.D., F.R.S., F.G.S. (Geologist-in-chief).

THE Committee of the Palestine Exploration Fund, in the summer of 1883, resolved upon sending out an expedition to examine the geological structure of the Jordan Valley and Western Palestine, together with that of the Valley of the Arabah, with a view to determine the mode of their formation and physical history. It was also intended to connect the triangulation of the district of Mount Sinai (Jebel Musa) with that of Western Palestine along the district of the Wâdy el Arabah; and to determine the elevation above the sea of the watershed (or "saddle") of that valley, with reference to the practicability of the projected "Jordan Valley Canal Scheme." Several collateral objects were also kept in view—such as the investigation of the sites of Ezion Geber, Kadesh-barnea, and other localities connected with the Israelitish migration and history; but in this place only the scientific aspects of the Expedition will be referred to.

Besides the author, who was put in command of the Expedition, the other members were Major Kitchener, R.E., and Mr. Armstrong (formerly Sergeant-Major, R.E.), who joined us in Egypt; Mr. H. C. Hart, Trin. Coll., Dublin, who had been a member of Captain Nares' Polar Expedition, and now joined as botanist and naturalist; Mr. Reginald Lawrence, Associate of the Royal College of Science, Dublin who acted as meteorologist; and Dr. E. Gordon Hull, who was appointed assistant and medical officer.¹

The arrangements for providing camels, tents, food and supplies were undertaken gratuitously by the well-known firm of Messrs. T. Cook & Son, to whom it is only due to say that they did everything in their power for the comfort and safety of the members of the Expedition. A rendezvous of the whole party, including conductor, dragoman, and Arabs of the Towara tribe, took place at Cairo on the 7th November, 1883, and on Monday, the 11th of the same month, the party started for their desert journey from Moses' Wells (Ayun Musa), near Suez.

The route taken lay along the plain bordering the Gulf of Suez to Wâdy Gharandel, and thence by the Wâdies Hamr, Suwig, and Nasb, Bark, Lebwey, Berrah, and Es Sheikh, to the base of Mount Sinai (Jebel Musa). Thence, after a few days, in a north-easterly direction by the Wâdies Zelegah, Biyar, El Ain, Et Tihyah, and Ras en Nakb to Akabah.

Here the Arabs of the Towara tribe who had conveyed the party thus far were dismissed; and arrangements were entered into with the Sheikhs of

¹ Mr. Hart has considerably added to the recognised flora of the district traversed, and Mr. Lawrence has furnished a daily register of the temperature and aneroid readings. Dr. E. G. Hull brought home a large number of photographs.

the Alowîns for a convoy along the Wâdy el Arabah to Petra, and the shore of the Salt Sea (Bahr Lut). This having been effected, the party left Akabah on the 3rd December; and after visiting Petra, Mount Hor (Jebel Haroun), and several of the branching valleys on either side, reached Es Safieh on the 17th of the same month, and camped by the village of the Ghawarnehs, where they remained ten days, including Christmas Day. Horses and mules having at length arrived from Jerusalem, accompanied by a small escort of Turkish cavalry, the party crossed to the western shore of the Salt Sea, and after examining Khasham (or Jebel) Usdum (the salt mountain), ascended by the Wâdy Zuweirah towards the tableland of Southern Palestine, camping successively at Wâdy el Abd, Tel el Melh, Bir es Saba (Beersheba), Tel Abn Hareireh, and reaching Gaza on the last day of the year. Here the party would have been obliged to remain in quarantine for fifteen days but for the friendly offices of Lord Dufferin, the British Ambassador at Constantinople, who procured their release on the morning of the fifth day. They then proceeded onwards by Jaffa to Jerusalem, from whence excursions were made to the Jordan Valley, and other places around, and by which two complete traverses of Southern and Central Palestine were effected. The whole distance traversed was about 700 miles, of which 500 miles were on camel-back, the remainder on horse-back. A final expedition through Northern Palestine was then arranged for, but was brought to an end by a heavy fall of snow, which covered the whole of the tableland of Palestine to a depth of 2 feet and upwards. The party left Jaffa on their return to England on Friday, 25th of January, Major Kitchener having previously returned to Egypt.

Scientific results.—Before proceeding to give an outline of the scientific results of the Expedition, the author desires to express his obligations to the writings of previous explorers in the same field, especially to those of Russeger, Fraas, Tristram, and of MM. Lartet and Vignes, of the expedition carried out by the Duc de Laynes.

1. A complete triangulation of the district lying between the mountains of Sinai and the Wâdy el Arabah, including that of the Wâdy el Arabah itself, bounded on the west by the tableland of the Tîh, and on the east by the mountains of Edom and Moab. An outline survey along the line of route was also made, and has been laid down in MS. on a map prepared by Mr. Armstrong on the same scale as the reduced Map of Palestine, viz., $\frac{3}{8}$ inch to one statute mile, or $\frac{1}{168960}$.

2. Some important rectifications of the borders of the Salt Sea, and of the Gulf of Akabah, were also made.

3. A geological reconnaissance along the line of route through the districts of Sinai, Akabah, and the Wâdy el Arabah, including the following particulars:—

(a) Collections of fossils from the Wâdy Nasb Limestone, in addition to those already made by Mr. Bauerman and Colonel Sir C. W. Wilson. These fossils (which are being examined by Professor Gollas) go to show that this limestone is of Carboniferous age; the Wâdy Nasb limestone was found to continue over a considerable region north of Mount

Sinai, and was again recognised amongst the mountains of Moab on the east side of the Salt Sea in the Wâdy el Hessi. As this limestone rests upon a red sandstone foundation, this latter may also be assumed to be of the same geological age, and therefore cannot be the representative of the "Nubian Sandstone" of Russeger, which (as Professor Zittel has shown) is of Cretaceous age. I propose to call this formation, therefore, "the Desert Sandstone." It forms with the limestone a strip along the borders of the ancient rocks of paleozoic or archæan age, and is about 400 feet in average thickness; the base is generally a conglomerate.

(b) Above the Wâdy Nasb limestone is another sandstone formation, of which a large portion of the Debet er Ramleh is formed. It is laid open in the Wâdies Zelegah, Biyar, &c., and along the mountains of Edom and Moab. Out of this rock have been hewn the ancient temples, tombs, and dwellings of Petra and the Wâdy Musa. It stretches along the southern escarpment of the Tih plateau, and forms the base of the limestone cliffs along the margin of the Wâdy el Arabah as far north as Nagb el Salni. This sandstone formation is soft, red, or beautifully variegated, and is in all probability of Cretaceous age, and therefore the true representative of the "Nubian Sandstone" of Russeger. It will thus be seen that there are two red sandstone formations, one below, the other above the Carboniferous limestone of the Wâdy Nasb.

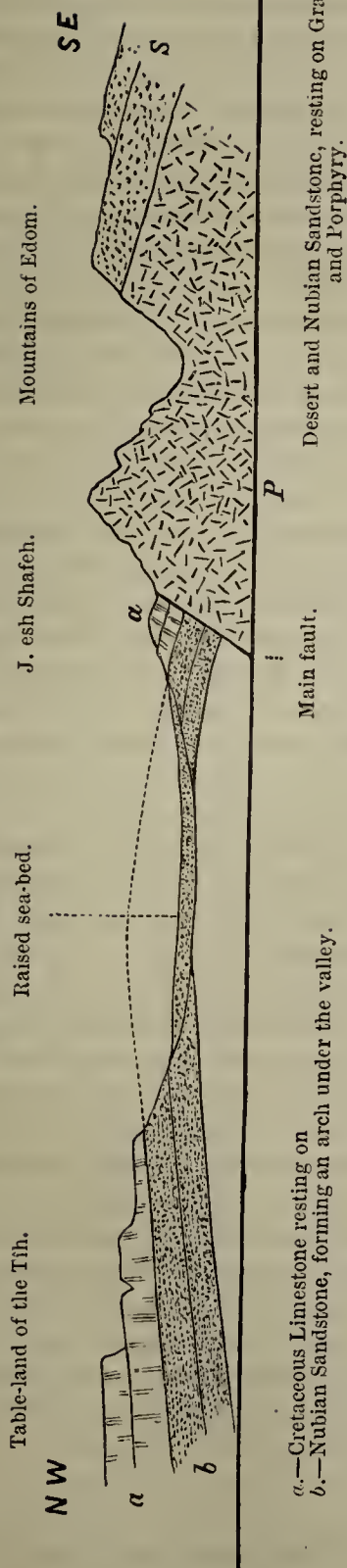
(c) The geological structure of the Wâdy el Arabah was examined throughout a distance of 120 miles from south to north. That it has been hollowed out along the line of a main fault, ranging from the eastern shore of the Salt Sea to that of the Gulf of Akabah, was clearly determined; and the position of the fault itself was made out and laid down on the map¹ in six or seven places, one being about ten miles north of Akabah, another near the watershed, in which places the limestone of the Tih (cretaceous-mammalian) is faulted against the old porphyritic and metamorphic rocks. I here give two sketch sections to illustrate the structure at these points (see p. 163).

There are numerous parallel and branching faults along the Arabah Valley, but there is one leading fracture running along the base of the Edomite Mountains, to which the others are of secondary importance; this may be called "The Great Jordan Valley fault." The relations of the rocks in the Ghor and Jordan Valley have already been shown by Lartet, Tristram, Wilson, and others, to indicate the presence of a large fault corresponding with the line of this remarkable depression, and the author considers the fracture he has observed in the Arabah Valley to be continuous with that of the Jordan.

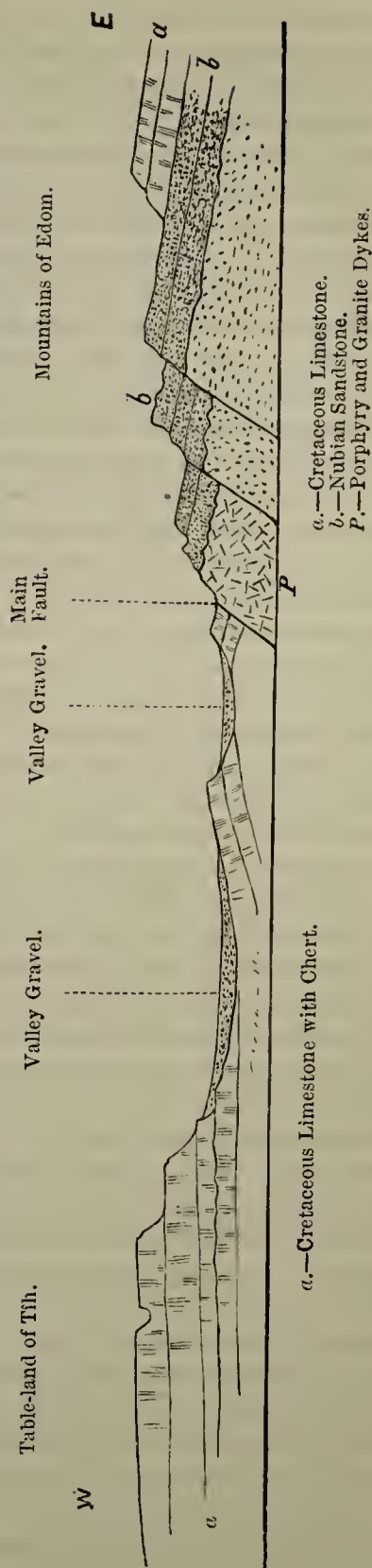
(d) The ancient rocks which form the floor either of the Desert, or Nubian, sandstone formations, consist of granite, gneiss, porphyries, and more rarely metamorphic schistose rocks—together with volcanic rocks, consisting of agglomerates, tuffs, and beds of felspathic trap. The author

¹ The map used was an enlarged plan from Smith and Groves' Ancient Atlas (J. Murray).

SKETCH SECTION ACROSS THE WÂDY EL ARABAH.



SKETCH SECTION ACROSS THE WÂDY EL ARABAH, SHOWING ITS STRUCTURE NEAR THE WATERSHED, OR SADDLE.



is disposed to concur with Dr. Lartet in considering the gneissose and granitoid rocks to be of archæan (or Laurentian) age, as they are probably representative of those of Assouan in Upper Egypt, which Principal Dawson has recently identified with those of this age. The granites and porphyries are traversed by innumerable dykes of porphyry and diorite, both throughout the Sinaic mountains and those of Edom and Moab; and the author considers it probable that the volcanic rocks which are largely represented along the base of Mount Hor, and of Jebel Somrah near Es Safieh, are contemporaneous with these dykes. As far as the author was able to observe, none of these dykes penetrate the Desert or Nubian sandstones, and if so, they may be considered of pre-Carboniferous age. The upper surface of the ancient rocks was extremely uneven previous to the deposition of the Desert sandstone, having been worn and denuded into ridges and hollows; over this irregular floor the sandstone strata were deposited.

4. The occurrence of terraces of marl, gravel, and silt, through which the ravines of existing streams have been cut at an elevation (according to aneroid determination) of about 100 feet above the level of the Mediterranean, was taken to show that the level of the Salt Sea (Bahr Lut) at one time stood about 1,400 feet higher than at present. These beds of marl were first observed at the camp at Ain Abu Beweireh; they contain blanché shells of the genera *Melanopsis* and *Melania*. The beds of marl were observed to be enclosed by higher ground of more ancient strata in every direction except towards the north, where they gently slope downwards towards the borders of the Ghor, and become incorporated with strata of the 600-foot terrace.

The author concurs with Dr. Lartet in thinking that the waters of the Jordan Valley did not flow down into the Gulf of Akabah, after the land had emerged from the sea; the disconnection of the inner and outer waters was very ancient, dating back to Miocene times.

The occurrence of beds of ancient lakes—consisting of coarse gravel, sand, and marl, amongst the mountains of Sinai, and in the Wâdy el Arabah, where now only waterless valleys occur, taken in connection with other phenomena, have impressed the author with the conviction that the former climatic conditions of Arabia Petraea were very different from those of the present day. Such terraces have been observed by Dr. Post in the Wâdy Feirân, and Colonel Sir C. W. Wilson in the Wâdy Solaf, and by the author in the Wâdies Gharandel, Goweisah, Hamr, Solaf, and Es Sheikh or Watiyeh. It would appear that, at a period coming down probably to the prehistoric, a chain of lakes existed amongst the tortuous valleys and hollows of the Sinaic peninsula. The gypseous deposits of Wâdy Amarah and of 'Ain Hawareh are old lake beds, and Mr. Bauerman has observed remains of fresh-water shells (*Lymnaea truncatula*) and a species of *Pisidium* in "lake or river alluvium" of the Wâdies Feiran and Es Sheikh. ("Quart. Journ. Geol. Soc.," Vol. XXV, p. 32.)

7. The author considers it probable that these ancient Sinaitic lakes belong to an epoch when the waters of the Mediterranean and the Red Sea rose to a level considerably higher than at present, and when, consequently,

there was less fall for the inland waters in an outer direction. The evidence of a submergence, to a depth of at least 200 feet, is abundantly clear in the occurrence of raised beaches or sea beds with shells, corals, and crinoids of species still living in the adjoining waters. The raised beaches of the Mediterranean and Red Sea coasts have been observed by the officers of the Ordnance Survey, and by Fraas, Lartet, Schweinfurth, Post, and others. They were observed by the author at the southern extremity of the Wâdy el Arabah, and shells and corals were found round the camp of the 3rd December at an elevation of about 130 feet above the Gulf of Akabah.

These ancient sea beds are represented in the Egyptian area by the old coast line of 220 feet, discovered by Fraas along the flanks of the Mokattam Hills above Cairo, and recently described by Schweinfurth. (*Über die geol. schichtunghiederung d. Mokattam bei Cairo; Zeit. d. Deuts. Geol. Gesel*, 1883.) The period in which the sea rose to this level may be stated in general terms as the Pliocene, but it continued downwards till more recent times; and the author believes that at the time of the Exodus the Gulf of Suez reached as far as the Great Bitter Lake (*Quarterly Statement*, April, 1884), a view in which he is supported by Principal Dawson, F.R.S. It is scarcely necessary to observe that through the longer portion of this period of submergence Africa was disconnected from Asia.

8. The Miocene period is not represented by any strata throughout the district traversed by the Expedition. The author considers that in this part of the world the Miocene period was one of elevation, disturbance, and denudation of strata; not of accumulation. To this epoch he refers the emergence of the whole of the Palestine, and of the greater part of the Sinaitic, area from the sea, in which the cretaceo-nummulitic limestone formations were deposited. To this epoch also he considers the faulting and flexuring of the strata is chiefly referable; and notably the formation of the great Jordanic line of fault, with its branches and accompanying flexures in the strata—which are very remarkable along the western sides of the Ghor. These phenomena were accompanied and followed by extensive denudation and the production of many of the principal physical features of the region referred to.

9. The evidences of a Pluvial period throughout this region are to be found (*a*) in the remains of ancient lake beds, (*b*) in the existence of terraces in the river valleys, (*c*) in the great size and depth of many valleys and gorges, now waterless except after severe thunderstorms, and (*d*) in the vastly greater size of the Salt Sea (or Dead Sea), which must have had a length of nearly 200 English miles from north to south at the time when its surface was at a higher level than that of the Mediterranean at the present day. The author considers that this Pluvial period extended from the Pliocene through the post-Pliocene (or Glacial) down to recent times. As it is known, from the observations of Sir J. D. Hooker, Canon Tristram, and others, that perennial snow and glaciers existed in the Lebanon during the Glacial epoch, the author infers that the adjoining districts to the south of the Lebanon must have had a climate approaching that of the British Isles at the present day;

and that, in a region of which many parts are over 2,000 feet in elevation, there must have been abundant rainfall. Even when the snows and glaciers of the Lebanon had disappeared, the effects of the colder climate which was passing away must have remained for some time, and the vegetation must have been more luxuriant down to within the epoch of human habitation. The author's views generally coincide with those of Theobald Fisher, as extended by him to a much wider area. ("Studien über das Klima der Mediterranean Lander," Peterman's Mittheilungen, 1879.)

10. The author considers that there are reasons for concluding that the outburst of volcanic phenomena in North-Eastern Palestine in the region of the Jaulan and Hauran, &c., has an indirect connection with the formation of the great Jordan Lake of the Pluvial period. The presence of water in considerable volume is now recognised as necessary to volcanic activity, and the author submits that this interdependence was brought about when the waters of the Lake stretched as far north as the little Lake of Huleh. These waters, under a pressure of several hundred feet, would find their way into the interior of the earth's crust along the lines of the great Jordan Valley fault, and of its branches, and thus supply the necessary "steam-power" for volcanic action. The period when the volcanoes of the Jaulan and Hauran were in action appears to have ranged from the Pliocene through the post-Pliocene to the beginning of the recent; when, concurrent with the falling away and partial drying up of the waters of the great Lake, the volcanic fires became extinct and the great sheets of basaltic lava ceased to flow.

If these views are correct, it would seem that during the Glacial epoch, Palestine and Southern Syria presented an aspect very different from the present. The Lebanon throughout the year was snow-clad over its higher elevations, while glaciers descended into some of its valleys. The region of the Hauran, lying at its southern base, was the site of several extensive volcanoes, while the district around, and the Jordan Valley itself, was invaded by floods of lava. A great inland sea, occupying the Jordan Valley, together with the existing comparatively restricted sheets of water, stretched from Lake Huleh on the north, to a southern margin near the base of Samrat Fiddân in the Wâdy el Arabah of the present day, while numerous arms and bays stretched into the glens and valleys of Palestine and Moab on either hand. Under such climatic conditions, we may feel assured, a luxuriant vegetation decked with verdure the hills and vales to an extent far beyond that of the present, and amongst the trees, as Sir J. D. Hooker has shown, the cedar may have spread far and wide.

11. The author has not thought it necessary to go into the question of the origin of the salinity of the Salt Sea, as this question is now fully understood. He is obliged to differ with Dr. Lartet in his view of the origin of the salt mountain, Jebel Usdum,¹ which he (the author) regards

¹ Lartet regards the strata of this mountain as belonging to the Nummulitic period.

as a portion of the bed of the Salt Sea, when it stood about 600 feet above its present level. This level exactly corresponds to that of the terraces, both along the south and east of the Ghor, formed of lacustrine materials. The upper surface of Jebel Usdum was examined by Messrs. Hart and Laurence, of our party, but previous explorers have considered the sides inaccessible.

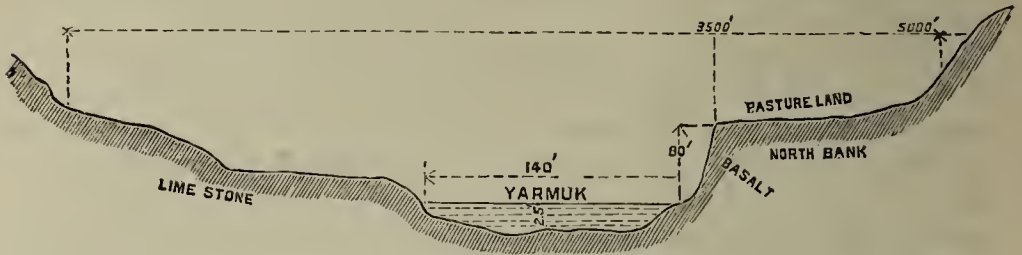
12. The author concurs with previous writers in considering that the Cretaceous and Tertiary periods succeeded each other over this region (at least as far as the marine deposits are concerned) without any important physical disturbances; in consequence of which the limestone formations of these periods are in physical conformity and are generally incapable of separation. It seems probable, however, that while the Nummulitic limestones predominate in the Egyptian and Nubian areas, those of the Cretaceous period were more fully developed over the area of Arabia Petraea and Palestine.

The scientific results of which the above is a summary are intended to be published *in extenso* by the Palestine Exploration Fund, together with a geological map of the whole district, and one on a larger scale of Wâdy el Arabah. The popular narrative of the Expedition will appear before the close of the year.

NOTES ON THE JAULÂN.

THE map which accompanies these notes is the result of a flying survey made by my travelling companion, Mr. Schumacher, in the course of a short exploratory ride which I took with him up the valley of the Yarmuk, beyond the Baths of Amatha, as well as of a survey of the adjoining part of Jaulân, which he made with a view of investigating its practicability for a line of railway. As I did not accompany him upon this latter expedition, I will merely give the results of my observations of the valley of the Yarmuk. The hot sulphur springs of Amatha, with the remains which surround them, and which are mentioned by Eusebius as being second only in the estimation of the Romans to the Baths of Baice, have been visited and described by two or three travellers, and although a more accurate investigation of these interesting ruins would doubtless prove richly remunerative from an antiquarian point of view, my opportunities were too limited to enable me to add to the stock of existing information. So, probably, would be an examination of the impenetrable jungle of M'Khaibeli, with its extensive grove of date-trees, and its hot sulphur spring, which is situated on the other side of the river, and about two miles higher up it; but it would require a stay of some days to make the necessary clearings, and cut paths through the vast thicket which is now the haunt of wild boar and other wild animals, which make their lairs amid the ruins that it no doubt conceals. Beyond this point, the

river, so far as I am aware, has never been explored, and it was with the view of tracing its course as far as practicable that we started one morning last April from our camp at Amatha. Some idea of the volume of water in the Yarmuk at this season of the year may be formed from



SECTION ACROSS NAKR YARMUK NEAR HAMA.

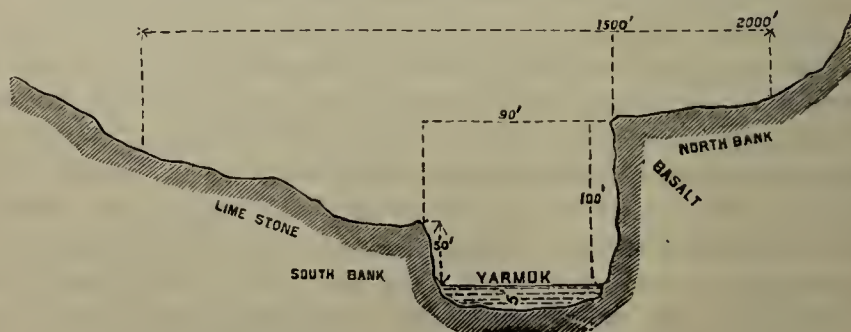
the fact that the river at this point was 140 feet broad, with a very swift current, that the water reached high up our saddle flaps, and that only four days previously the stream here had been unfordable. As, owing to the precipitous character of the banks, the river can only be followed by constantly crossing it, its present flooded condition augured badly for our success. Opposite M'Khaibeh the basalt cliffs rise abruptly from the foaming torrent to a height of about 300 feet, and I observed on their face the square openings into caves, which had evidently been the retreats of robbers at a former period, such as those who, as we know, in the time of Herod the Great, inhabited eyries of this description in the Wâdy Hamâm, near the Plain of Gennesereth. Huge eagles were sailing above them now. A little beyond M'Khaibeh the path diverged to the right, rising up the steep grassy spurs which descend from the forest-covered ridge, on the top of one of the summits of which are the ruins of Gadara, and so leading to the wooded plateau of Keferat. We declined to be seduced from our purpose by following this, and, although the natives assured us that there was no path up the valley, we decided to keep along a cattle track which soon led us to a precipice, across the face of which we had great difficulty in making our way. It had probably never before been used by anything but goats. We ultimately managed to scramble down it to the rocky margin of the stream, only to find it necessary to leave it again, and cross a high shoulder which formed another overhanging clift. The view from this point was very grand—indeed I do not know any finer scenery in Palestine than that afforded by the gorges through which the Yarmuk cuts its way between the elevated plateaus of Jaulân and Ajlun to the Jordan Valley. Here the limestone and basalt formations meet, and in places one is superimposed upon the other, forming a black and white cliff of most singular aspect. Above the precipices on its right bank, which immediately overhang the river, are steep grassy slopes running up to the base of another series of cliffs, above which is the level plateau; on the left bank, which we were following, the cliffs are more broken and less lofty, the lateral valleys deeper and more irregular, and the grassy slopes in their descent soon meet the oak woods which show against

the sky line on the summit of the ridge. The upper edges of the plateau are from one to two miles apart in an air line, while the bed of the river is about 1,400 feet below them. After scrambling with great difficulty as near the bottom of the valley as we could, for about two hours, we reached a point where the side of the mountain having slipped away, exposed a sheer precipice of about 1,000 feet, and formed a mound in front of us, round which the river curled, as it swept under an opposite cliff. Here progress seemed barred on both sides, but seeing some Bedouin tents on the opposite bank, pitched on a level patch near the river of which they had taken advantage, we determined to attempt a ford with a view of interviewing them; for we had dispensed with a guide, my experience in exploratory travel having led me to the conclusion that guides generally take you in the direction which they want to go, and you don't. When the Arabs saw us approaching the river with the intention of fording it, they waved us back, and, in fact, the crossing, owing to the huge boulders, and the depth and swiftness of the current, was not without risk and a wetting; and they told us that we had crossed where there was no ford, and though the attempt had succeeded, it would be folly to make other attempts of a similar nature higher up. These people were not Bedouins, but sedentary Arabs from the village of Somma, who camp at this season in the valley to look after their grain and pasture their flocks; the name of their present camp was Zubennis. They received us with great hospitality, and, indeed, though the valley is reported unsafe, we found nothing to justify its reputation. We had not long left the Arab camp before we found that their account of the impossibility of a further ascent was correct. Perhaps at the dryest season, by taking advantage of the river bed, the attempt would be practicable; as it was, we reached a point a little below the junction of the Wâdy Rukad with the Yarmuk.

As the Arabs had told me that on the summit of a high-crested hill opposite, called Kalat el Hösn, I should find ruins, I determined to recross the river at our former ford, and climb up to them. This, after a hard scramble, we succeeded in doing. Here I found a Khurbet, covering a few acres of ground; from its position on the summit of an almost pyramidal hill, it was evidently an ancient fortress. In places the drafted stones were still standing on the old foundations; there were some cisterns, and in the neighbourhood some rock-hewn tombs; the sides of the loculi, however, were completely broken away in the only ones the entrances to which admitted of examination. Unfortunately the name is too common to be of any assistance for purposes of identification. The elevation of Kalat el Hösn above the sea by my aneroid was 870 feet, and above the river about 1,000. I now made for a still higher summit, called by the natives Tel el Hetaliyeh: this has an elevation of 1,020 feet, and forms in fact the crest of the mountain, at the point where the slide already mentioned occurred. From the edge we looked sheer down a giddy height of at least a thousand feet. From this point we had a commanding view of the valley of the Yarmuk, and up the Wâdy Rukad, also of the Jaulân plateau, with the village of Dabusieh on its opposite edge. The interesting features of the Yarmuk

which have yet to be visited are its cataracts ; one of these will, I think, be found just above Tel el Ashera, the other possibly not far below it, but the upper one must be the most important. The fall of this river in the course of seven or eight miles must be at least 2,000 feet, and with its volume of water in the spring must afford a magnificent spectacle. My hope on the occasion was to have visited this waterfall, but I was unfortunately unable to complete my trip as I intended. The Allan, the Rukad, and other tributaries of the Yarmuk each have their own waterfall before joining the river. Mr. Schumacher, who has seen the fall of the Rukad, tells me that it falls at Jamly 300 feet in an unbroken sheet of water over a precipice.

We now struck, by a path we found through the woods, in a southeasterly direction. The oak trees grew sparsely, like those in a park, over the rich plateau, now carpeted with wild flowers. The precipitous ravines which intersected this upland, and which were sometimes covered with a dense undergrowth, frequently compelled us to depart from the direction which our compasses suggested as the proper one, and after riding for about three miles we were getting into despair at ever finding a practicable opening to the westward, when we fortunately came upon some peasants, who put us in the way. At this point I found two handsome sarcophagi, some tombs, hewn stones, and all the evidences of an ancient site, and on inquiring if it had a name was told *Haleebna*, which being interpreted means "Our milk." Thus our ride, if it had not been so productive of additions to the geography of the Yarmuk as I could have desired, furnished us with two hitherto unknown sites of ancient towns. Our way now led us down a lovely and romantic gorge, called the Wâdy el Humra. The elevation of the plateau at the point where we commenced the descent was 1,250 feet above the sea, and 1,800 above the Baths of Amatha. A little spring which we came upon near the head of the valley we were now descending soon swelled into a purling brook ; the steep and rocky hill-sides which rose abruptly from it were thickly clothed with a rich undergrowth, which on our right was broken off near the bottom into a precipitous white limestone cliff. Here we emerged upon



SECTION ACROSS THE YARMUK AT BIRKET EL ARAIS.

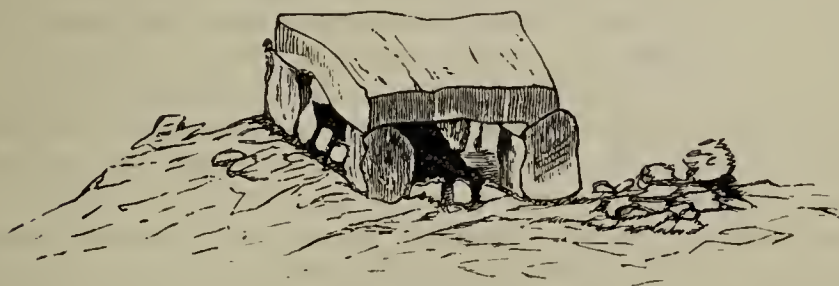
the grassy spurs which slope down to the Yarmuk, and came suddenly upon a pool of water, about a hundred yards long by fifty broad, called the

Birket el Arais, or Pool of the Bride. We had now reached the limits of former exploration, and in half-an-hour found ourselves once more skirting the jungle of M'Khaibeh, and within sight of our tents, after a ride of much topographical interest, and a beauty of scenery unsurpassed by anything in Palestine.

LAURENCE OLIPHANT.

The map which accompanies this report traces the course of the Yarmuk from the Jordan Valley to its junction with the Nakr Rukâd and part of the course of the latter, the Wâdy es Sammuk, and the Nakr 'Allân. It embraces also the ruins and villages of Hama, Debusîyeh, Jamly, Kefr Elma, Fîk, Hetîn, Tsîl, Adwân, &c. The heights are given, with a great amount of information on the character of the ground, &c. At Tsîl were found a large collection of dolmens, one of which is sketched and is here figured.

DOLMEN NEAR TSÎL.



Dimensions.

				ft.	in.
Length of table stone ..	..	..	..	5	0
Breadth ..	..	..	..	2	6
Height from ground ..	..	..	..	2	0

PRÆ-EXILIC JERUSALEM.

ABSENCE from England has prevented me from returning an earlier answer to the objections raised by Captain Conder and Canon Birch to my views in regard to the topography of præ-exilic Jerusalem. I will now try to atone for the delay, and do my best to meet the thrusts of my doughty antagonists.

I will take Captain Conder first, more especially as Canon Birch agrees with me about what is, after all, the main point, that is to say, the site of Zion. My statement that Dr. Guthe had discovered a valley separating Zion from Moriah, and had come across Solomonic walls to the south of the lower Pool of Siloam, was derived from his report upon the explora-

tions he had undertaken on the so-called Ophel-hill in conjunction with Mr. Schick. This report was published last year, with elaborate plans, in the *Journal of the German Palestine Society*. I had not myself seen either the walls or the indications of the valley, and had no idea that Dr. Guthe's assertions in regard to them were not to be trusted.

Captain Conder has misunderstood my meaning in thinking that I propose to confine the inhabited Jerusalem of the royal period to Zion, the City of David. On the contrary, I hold that the Jebusite town stood on the Temple-hill, and that this town continued to be inhabited, first of all by Jebusites during the reign of David, and subsequently by the retainers of the Court, the servants and slaves of the Temple, and, as the book of Nehemiah informs us (iii, 31, 32), by "the merchants" and goldsmiths as well. Captain Conder seems to have had in his mind the Temple area of later times, and to have forgotten that the Temple-hill was once thickly populated like the City of David itself. Modern criticism has shown that the Temple of Solomon was a sort of chapel royal attached to the palace, and the whole building would appear from the measurements given in 1 Kings to have been of comparatively small size. But even so it was intended to accommodate a large number of people, though it by no means occupied the whole of what I mean by the Temple-hill. When it is further remembered that the walls of the lower city extended sufficiently far south to enclose the Pools of Siloam, it is evident that the size of Jerusalem, for an ancient city, was by no means despicable. One has only to take a model of modern Jerusalem to see that it was well worthy of being the capital of a small kingdom like that of Judah. How would ancient Hebron have compared with it in respect of size? What has struck me more than anything else when examining the sites of the famous cities of Greece and Asia Minor is what is in our eyes the extremely small area which they cover. Ancient Jerusalem, according to my conception of it, was large by the side of them. But, as Mr. Besant has noticed, we have a conspicuous example of the same fact in our own country. Old Sarum "contained a cathedral with a monastery, a castle and a town, all within a space large enough for a London square garden." Those who have visited the Palatine Hill at Rome must have observed with astonishment the diminutive size of primitive Rome. Not only were the inhabitants of these old cities closely packed together, but many of them lived habitually outside the walls, and only came into the city in times of danger. Moreover, where there is a large slave population, and houses more than one story high, the amount of population per acre is very considerably greater than Captain Conder would allow. Hence, to sum up, according to my theory, "the capital of Syria, in David's time," did not occupy "only 8 acres," but a great deal more, and I see no difficulty in believing—I do not say that it is necessary to believe—that it was populated at the rate of "2½ yards by 2 yards per soul."

Captain Conder next assumes that I value Josephus "at a very low estimate." I know not why he should bring this accusation against me, as I am quite ready to believe whatever Josephus may say, provided it is not

contradicted by external or internal evidence. Certainly I have never written of him, as Captain Conder has done ("Handbook to the Bible," p. 368), that "inconsistency, inaccuracy, and exaggeration are thus plainly discoverable in the measurements given by Josephus."¹ But I cannot see that the passage he quotes from Josephus (5 "Wars," iv, 2) supports his views, unless we suppose that the Jewish historian stated what he knew to be contrary to fact. Here is Captain Conder's translation of the passage: "David and Solomon and the succeeding kings were very zealous about this work (*i.e.*, the wall). Now that wall began on the north, at the tower called Hippicus." Does Captain Conder think that Josephus can in these last words be referring to a wall built either by David or by any of the other early Jewish kings? If he is so referring, he would be making a false statement, which would invalidate all else that he says about the matter. Every one knew that the tower of Hippicus did not belong to præ-exilic Jerusalem. It is plain that Josephus is describing a wall such as it existed in his own time, some portions of which had been built by David, other portions by Solomon, other portions again by later kings, while the portion which began at the tower of Hippicus, and was, therefore, in connection with this work of fortification, was constructed in the Herodian period.

I now come to Canon Birch. We, at all events, agree in having a common basis of operations from which to start, though he seems to me unnecessarily to complicate and endanger his views by supposing that the City of David stretched across a deep valley—a phenomenon without precedent, so far as I know, in the annals of *primitive* towns. His opposition to my conclusions rests upon the assumption that "before the Siloam Tunnel was made, the waters of Gihon (Virgin's Fount) *flowed softly* to Siloam along an aqueduct on the eastern side of Ophel."² If this

¹ Captain Conder, who maintains that Akra was the hill westward of the Temple-hill, must consider Josephus to have been similarly inaccurate in his description of the levelling it underwent in the time of Simon the Hasmonean. Josephus (13 "Antiq.," v, 6; 5 "Wars," iv, 1) asserts that its summit was removed in order that it might no longer dominate over the Temple-hill, but that on the contrary the Temple might stand "higher" than the citadel, a third hill over against it, and separated from it by the "broad" Tyropœon valley, which was "naturally" lower, being thus raised above it. Now the summit of Captain Conder's Akra is 2,488 feet, or 56 feet higher than the highest part of the Haram; while the third hill, Captain Conder's Zion, can only by a stretch of language be said to be divided from his Akra by the Tyropœon valley. This latter hill is marked as 2,535 feet high, or 103 feet higher than the Haram, in his plan. Nor do I see how Captain Conder can explain 13 "Antiq.," ix, where the close contiguity of the citadel to the Temple is mentioned along with the fact that the soldiers of the citadel were able to run out and injure the Jews as they were going up to worship. How could this have happened except on the western side of the Temple-hill if the citadel was where Captain Conder would place it?

² Captain Conder asks, "Is it necessary to conclude that 'the waters of Shiloah that go softly' (Isa. viii, 6) were running in an aqueduct? May they not have run in an open stream down the valley?" The answer is that, as M. Dren-

aqueduct is not discovered, he will "admit the overwhelming weight" of one of my arguments. After the failure of Sir Charles Warren to find any traces of this hypothetical aqueduct in the galleries with which he undermined the eastern side of the so-called Ophel, I think I might be excused from replying to any of the arguments Canon Birch has urged against my counter-theory. I have, at least, facts on my side; he only a conjecture, which excavations have hitherto failed to support. I will, however, deal with them in due order.

(1) I doubt whether fulling was ever carried on at a tank the water of which was used for drinking. Was it likely that cloths would be washed at the spring on which all the fresh water supply of Jerusalem depended? Moreover, if this spring were the Gihon of Scripture it would not be En-rogel. On the other hand, the word *En* shows that a mere reservoir is not meant.

I see no reason for considering "the old pool" to have been on a higher level than the Pool of Siloam, unless we imagine that it was fed from the Virgin's Fount. But for this we have no authority.

(2) *Public* threshing-floors were naturally outside the walls; Araunah's was a *private* floor.

I thought that it was agreed by all Hebrew scholars and critics that the expression "*the* house," unless specially qualified, signified "the house" *par excellence*—that is, "the house of God." Can Canon Birch find any other meaning for the phrase?

I must protest against the statement that my interpretation of 2 Samuel v, 8, is a "popular error." The Hebrew tenses admit of no other; we have *waw consecutivum* in each clause. The narrative sets before us a sequence of events. First of all, David went to Jerusalem (verse 6); then (*waw consec.*) "it was said to David," &c.; then (*waw consec.*) David took the stronghold of Zion which is "the City of David" (verse 7); then (*waw consec.*) David said "on that day," &c. (verse 8). What happened, therefore, was this. David appeared before Jerusalem, where he was taunted by the Jebusites; then he first captured the outpost of Zion; and after this, but on the same day, he promised rewards to "whosoever getteth up to the gutter, and smiteth the Jebusites." The flower of the Jebusite garrison was in the outpost of Zion; Jebus itself was considered sufficiently strong to be protected even by the blind and the lame.

Where is the proof that "Araunah betrayed Zion?"

I will leave Professor Robertson Smith to defend himself, which he is well able to do, and pass on to the last arguments Canon Birch brings against me. He begins by asking me to account for "the old arch anterior to" Robinson's. I confess I do not know what he means by this; does he mean the base of the pier of the bridge 42 feet below the surface, and on a level with the stone pavement of the Herodian age? In any case an arch

bourg was the first to point out, the meaning of the word *Shiloah* shows that they ran through a tunnel. Moreover, a valley stream in Palestine does not usually "flow softly."

in Palestine has only one meaning that I can see ; its age is not earlier than the Græco-Roman time.

As I have not expressed myself with sufficient clearness in regard to Warren's tunnel, I will now quote the succinct description of it given by Mr. King, in his lately published "Recent Discoveries on the Temple-Hill at Jerusalem":—"Near the upper end of the [Siloam] tunnel, and only 50 feet from the Virgin's Fountain, the engineers came upon a lateral passage cut in the rock, and extending westwards into Ophel hill. The passage was nearly choked up with hard mud, but being cleared out was found to be 17 feet long, leading into a small chamber, with the floor scooped out in form of a basin. This basin is evidently a receptacle for water, and being 3 feet lower than the bottom of the tunnel, the supply was obtained from the Virgin's Fountain. Over this small chamber is a large shaft cut through the solid rock, 40 feet in height. At the top was found an iron ring fixed in the rock overhanging the shaft, to which ring a rope would be attached for hauling water up in a bucket. From the shaft a great corridor leads to a staircase, and that again leads to a chamber with a vaulted roof. The entrance to this passage was from the top of Ophel at a point a few feet below the ridge."

The careful workmanship of these passages, the niches for lamps—a Græco-Roman invention,—the iron ring, and the fact that the lower conduit led into the winding Siloam Tunnel, all go to show that this lower conduit was later in age than the Siloam one. In fact, the basin with which it terminates can only be explained on the hypothesis that it was intended to receive the surplus water of the Siloam Tunnel. If such a Tunnel had not already existed, the flow of water from the Virgin's Fountain would soon have choked both basin and conduit. How the vertical shaft, up which the water was hauled in a bucket, can be identical with the *tsinnor*, or "waterfall," of 2 Samuel v, 8, is more than I can understand.

A. H. SAYCE.

FRESH NEWS FROM KADESH.

By H. CLAY TRUMBULL.

(From the "Sunday School Times," April 26th).

It will be remembered by those who are at all familiar with the doubts and discussions concerning Kadesh-barnea, that the first modern discovery of the site of that ancient camping-ground of the Israelites was made, in 1842, by the Rev. John Rowlands, an English clergyman ; and that for nearly forty years after his visit to it, every effort at its re-finding proved abortive. Such experienced Oriental travellers as Abeken, Professor Palmer, Dr. Thomson, President Bartlett, Dr. Schaff, and others, from Germany, England, and America, sought in vain to reach that jealously

guarded and strangely illusive site ;¹ until, indeed, its very existence came to be involved in serious question.

It is also known to many, that while passing over the desert from Mount Sinai to Hebron, in the spring of 1881, I was enabled to re-find that site, and to confirm at every point the accuracy of Mr. Rowlands's observations and descriptions. In a recently published volume giving the result of my own observations in, and subsequent studies concerning, Kadesh-barnea, I took pleasure in showing how much credit was due to Mr. Rowlands for his energy and efficiency as an explorer ; and I dedicated the volume to him, and to the memory of two other Englishmen who had been engaged in similar researches. And now comes an interesting and an unexpected sequel to this story of Kadesh and the huntings for it.

Even since my re-finding of 'Ayn Qadees—the site of Kadesh-barnea—several attempts to visit it, or even to pass in its vicinity, have proved unsuccessful. Professor Post, of the American Protestant College at Beyrout, and his travelling companion, the Rev. Dr. Field of New York, were unable to secure an escort for the direct route Hebronward, from Castle Nakhl in the mid-desert, which would have carried them near the site in question. An English party of travellers was similarly disappointed. Mr. Edward L. Wilson, of Philadelphia, a man of exceptional energy and determination as an explorer, was also unsuccessful in his diligent search for 'Ayn Qadees ; although he had the assistance of my faithful dragoman Mohammed Ahmad Hedayah. During the past winter, an expedition from England, under the auspices of the Palestine Exploration Fund, was sent into the desert for the purpose of certain specified investigations, including a visit to the site of Kadesh-barnea. This expedition was led by Professor Hull, and accompanied by Captain Kitchener, an officer of the Royal Engineers, who has had large experience in Oriental surveys. Its results have proved of importance in many other directions, but not in that of Kadesh-barnea. In a personal letter recently received by me, Mr. Walter Besant, the Secretary of the Palestine Exploration Fund, says : “Kitchener has been across the [Desert of the] Tih, and found some curious old roads, &c. And he has also surveyed the Wâdy 'Arabah. He was anxious to visit Kadesh, but could not get there. Is it not strange how that place eludes search ?”

But what of Mr. Rowlands, all this time ? He has now reached the ripe age of seventy-five years, and is still in the active duties of the ministry, in a quiet English parish. This fresh and world-wide interest which had been awakened in the results of his early travels, quickens his old-time zeal in Oriental research, and he coolly packs his carpet-bag for another journey, and taking several members of his family with him he pushes on to Egypt, crosses over into the Arabian desert, clambers Mount Sinai, and then presses northward toward Hebron, stopping to take a look at 'Ayn Qadees, and show it to his children, as he goes by ; incidentally

¹ See the late Mr. Holland's Map and Notes, *Quarterly Statement*, Palestine Exploration Fund, January 1884, p. 9.

making fresh investigations into the site of the old home of Hagar, near the fountain which is on the Wall Road into Egypt, between Kadesh and Bered (see Gen. xvi, 7-14); and all this as deliberately and as easily as if he were going from one corner to another of his home garden, having the assistance of Arab servants who stood ready to do his bidding at every turn.

"I received your letter," he writes, "as you will be surprised to hear, at Cairo, in Egypt, in the course of a great tour I have undertaken for my son and daughter, who are with me, together with a niece as companion to my daughter; first through Italy, then through Greece, then through Egypt and Palestine, and back from Beyrout to Smyrna, Constantinople, and the Danube. I had not intended coming here [to Palestine] through the wilderness, meaning only to take my children to Mount Sinai and back to Suez, and from thence proceed by the Canal, Port Saïd, and Jaffa, to Jerusalem. But having received your letter, I felt very much tempted to go direct from Mount Sinai through the great wilderness, by Kadesh and Hebron, to Jerusalem, that I might be able to write to you from Jerusalem, and say that I had paid another visit to Kadesh; and finding some difficulty in our way by Port Saïd and Jaffa, on account of a state of quarantine at Jaffa, and the prospect of its continuance, I determined to take the course through the heart of the wilderness from Sinai by Kadesh to Jerusalem. But I found it too much for me at my time of life. I was quite knocked up for several days before we reached Jerusalem, and never was a hotel so welcome to me as the Mediterranean Hotel here on our arrival at Jerusalem, last Saturday; and the *rest* I have enjoyed here since. I have been regaining strength ever since, but I do not mean to move from this place for the north of Palestine until my health and strength are quite restored. I should like very much to give you a little sketch of my journey through the wilderness both to and from Sinai. But I feel quite unequal to it. The least thing, even to write a few lines or do anything, is for the present an effort to me. But I must say a few words about Kadesh, or 'Ayn Kades, and Moilahhi, or, as I take it to be, Beerlahairoi. We came first to Moilahhi, as the Arabs of the neighbourhood call it, and not Muweileh as many others call it, and they add (*i.e.*, the Arabs of the neighbourhood) in a very emphatic manner, the name Hagar, insisting on its being called Moilahhi Hagar, meaning not "a stone," but "a woman," Hagar, the mother of Ishmael. The Teyahahs, our conductors from Nakhel to Hebron, or to near Hebron, who were not so well acquainted with the localities nor so faithful and true as the Terrabin who conducted me before in these parts, tried to impose upon me by showing me a paltry little cave near, or close to, the ground, as the house of Hagar. Of course I knew better. The house of Hagar, or "Beit Hagar," as the Arabs of the place call it, consists of one principal square chamber, not a cave, but cut square out of a rock in the side of a precipice at some height from the ground, with a staircase leading up into it, and two smaller interior chambers for dormitories. The little crystal stream at Kadesh we found still flowing from the rock. But the appearance of the place is very much altered and spoiled by the Arabs,

who have digged a well close by, and the camels who gather round the well have trampled all the green slope. It is a great pleasure to me to tell you that I have seen the place again."

Mr. Rowlands' further claim as to the Arabic name of the supposed fountain of Hagar, is of importance in an effort at its identification. If he can now give the Arabic equivalents of that name, he will make the matter clear. The well of Hagar was called in the Hebrew, "Beer-lahai-roi," which means "Well of the Living One who Seeth," or "Well of the Living one of Vision." If the Arabic term is "Mâ-lehayy-râi," the meaning is "Water of the Living One Seeing;" which corresponds very closely with the Hebrew. Possibly Mr. Rowlands did not make sure of the Arabic equivalents of the term.

THE SEPULCHRE OF SHEBNA.

ISAIAH XXII.

EVERY one interested in Biblical topography must have read, more or less attentively, the controversy which has lately appeared in the *Quarterly Statement* concerning præ-exilic Jerusalem. I have been watching it for some time, more especially because I wished to obtain information upon a certain point to which my attention was recently drawn by a careful investigation of the original of the above chapter. The sepulchre of Shebna may have been long known to explorers; but if it has been pointed out anywhere, I regret that I have overlooked it. Since, then, the above-mentioned controversy was not continued in the last number of the *Quarterly Statement*, I trust I shall be permitted to bring this one point again before your readers; and shall deem it a great favour if any explorer would be kind enough to say whether traces can be discovered of the work to which I conceive the prophet here to refer, and which, if I estimate it correctly, was a local event of stirring times in the days of Hezekiah.

The chapter (Isa. xxii) upon which my question is founded is, I must premise, acknowledged to contain some very difficult passages. In order, therefore, to make the object of this paper clear, I must also show my views of the meaning of some of these passages. According to the textual heading of the chapter the "Burden" belongs to "the valley of vision." This I take to mean either the valley in which the prophet lived, or that low-lying street in the heart of Jerusalem in which most public sights were seen. The prophecy is divided into two parts: verses 1-14 a prophecy concerning the whole people, and verses 15-25 a prophecy concerning two individuals, Shebna and Eliakim. I take first the latter part, because, when we understand this rightly, it will help us to understand the whole. In verse 16 the prophet says: "What hast thou here

and whom hast thou here, that thou art hewing thee here a sepulchre ; thou hewer of thy sepulchre on high, graver of thy habitation in a rock ?” This is spoken to Shebna, and it seems to me to be the most important link between the two parts. But the latter portion of this verse, which I have translated in agreement with the awkward renderings commonly accepted, may, with greater grammatical accuracy, be translated thus : “My hewer has his sepulchre on high ; my digger has his dwelling on a rock.” This rendering, whilst it takes nothing from the clearness of the chief event here referred to, adds a hint at another circumstance in the history. The terms *digging* and *hewing*, though used in allusion to a great work, an extensive quarrying, which, as we shall see below, was being done at that time in the sight of all men, must evidently be understood here in a figurative sense. The precise signification of the figure may not be obvious to us at first sight, but was undoubtedly well understood by Shebna, to whom the words were addressed. Yet when we compare this with what is further said concerning Eliakim, then the conclusion forces itself upon us that the above figures signify gain ; so that “my hewer” is he that seeks my gain ; and in this sense, by the way, the sentence reads like a motto which might be an inscription over a sepulchre or on a tombstone.

For this is what we may call a new paragraph in the history of Jerusalem, combined with contemporary prophecy, and not found elsewhere. From this history it appears that Shebna and Eliakim had one after another held a high office in the kingdom, and that each in his turn had made himself unworthy of it by abuse. Their respective abuses, however, did not proceed from the same but from two different causes. Thus Shebna is denounced for seeking gain for himself who had no friends either to share it with during his lifetime, or to leave it to after his death (verse 16), but seemed to accumulate his treasures only to waste them upon a sepulchre which he apparently was making in a rock. Eliakim’s fall, on the other hand, is predicted on account of his too many friends. He had large connections of all kinds, small vessels, and vessels of cups and bottles, as they are ironically called (verse 24) ; and he, after being raised to Shebna’s place, or perhaps higher than he, is represented as allowing himself to be used by them as a handle for promoting the interests of them all. The figure by which the prophet describes Eliakim’s nepotism, is peculiarly striking and beautiful. He is like a well-fixed nail upon which all these vessels are hung. For through his means his numerous friends try to elevate themselves to high honour, and endeavour to obtain many riches. The prediction, therefore, is given of his entire collapse, together with the burden of them all hanging upon him (verse 25).

Now it is not easy to fix with certainty the exact date of this prophecy. Owing to the shifting nature of the Hebrew verb, and to the free use poetic writers often make of its various forms for one and the same tense, it is not impossible that it was written during Eliakim’s *régime*. Yet it is better to keep to the observable time-notes in both parts of the chapter ; and these, together with the lively pathos, and the vividness of the scenic descriptions,

rather point to the conclusion that it was the time when Shebna was seen quarrying the hill-side, and that the subsequent events are only declared as prophecy. As regards certain works which are hinted at in the first part of the chapter, viz., those of collecting the water of the numerous springs (בְּקִיעֵי not "breaches") of the City of David, of making a reservoir or artificial pool between the two walls instead of the old natural pond, and of destroying houses in order to build up a wall (verses 9-11; cf. 2 Kings xx, 20; 2 Chron. xxxii, 4, 5, 30), these are undoubtedly referred to as works done before. However, the thing we ought to expect as a proof that there was a quarrying which was the immediate cause of the prophet's writing, is an allusion to it in the first part as well as in the second; because, in all likelihood, both parts were written at the same time. Now the sepulchre is not mentioned in the first part; nor was it likely in itself to have given such great offence as to be the cause of these solemn utterances. Shebna only did there what was the custom of his age and country to do. But the sepulchre may have been only one of the objects of this quarrying; whilst another, though not mentioned distinctly, may have been the chief cause of these severe denunciations. Such an object, indeed, and the allusion we are seeking, can, in my opinion, be discovered together in a few words in verse 5. There the prophet says: "For a day of trouble, and treading down, and consternation with the Lord of Hosts in the valley of vision is"—what? The words which follow, מְקַרְקַר קֶר וְשׁוֹעַ אֶל הָהָר, have greatly embarrassed translators. But is there anything against my rendering them "is that of him that quarrieth the wall (*i.e.*, the natural wall or the face of the rock) and of widening along the mountain?" If there is nothing against this—and I believe it expresses a very natural signification of the words—then consistency runs through all the parts of the chapter, and then also what an important incident in the history of Jerusalem is here brought to light, but would have been lost without this notice of it!

The picture represents an extensive widening of the valley. Shebna seems to be the chief mover of the undertaking, using his position for the purpose of promoting it, and apparently at the same time making it a means of furthering his own interests. Though the sepulchre mentioned at verse 16 were not a reality but a predictive hint only, yet some selfish end was clearly mixed up with his interest in the work. Eliakim, on the other hand, then evidently in an inferior position, was probably opposed to it. Many people are on their flat Eastern housetops, debating the advantages and disadvantages of the work with much excitement and noise, the majority of them perhaps also watching its progress with demonstrations of joy (verses 1, 2). Then comes the royal prophet, more excited and more agitated with deep-felt feelings than all, and denounces the work together with other national follies of which they have been guilty on former occasions, as matters of weeping and consternation rather than of joy (verses 4, 5). For this work seems, moreover, to have been commenced soon after a battle which was fought perhaps in the immediate neighbourhood of the scene. The results of that battle are forcibly

described in another graphic verse (verse 3), which, although written with exquisite characteristic parallelisms, has been greatly misunderstood, but should be rendered thus :—"All thy officers who have fled together from the bow are bound. All thy captives" (*i.e.*, the prisoners thou hast taken) "who were bound together from afar have escaped." What, then, under these humiliating national circumstances, will be the result of this widening of the valley that was now being done under Shebna's auspices? Verse 7, whether it is history or prophecy, was undoubtedly written to point out this result or the kind of result which they should expect. "And it came to pass that the best of thy valleys were full of chariots" (*i.e.*, the chariots of Elam and Kir mentioned in the preceding verse), "and horsemen set a firm foot in the gate." But we do not know, unless it can be ascertained from the rock itself, whether the prophet's righteous indignation and inspired denunciation resulted in the immediate relinquishment of the work.

My question, therefore, now is, Can a hill-side be found with an escarpment which looks like a widening or the beginning of widening of a low entrance into Jerusalem? If so, and if a sepulchre can also be discovered in a prominent position in the wall, it is that of Shebna, and a most difficult chapter in the Bible is explained. I only add, in conclusion, that, though the sepulchre be found, Shebna's bones will not be found therein; because (according to verse 18) he was ultimately to be a prisoner and to die in a broad land—*i.e.*, in a land that is flat and has no rocks for sepulchres: therefore far away from Jerusalem, near which there is hardly any flat country at all.

E. FLECKER.

BOUNDARY BETWEEN "JUDAH AND BENJAMIN."

EVEN with the great progress we have made in the knowledge of the Holy Land, the accurate laying down of the *boundaries of the twelve tribes* of Israel presents much difficulty. When one reads the double descriptions of the boundary between "Judah and Benjamin" (Josh. xv, 5-11, and xviii, 15-19), it seems, as so many places and points are mentioned, and since we possess such an accurate map of the Palestine Exploration Fund, that to trace this boundary out on the map would be an easy matter. But if one tries this he soon finds difficulties, especially at the most important part, viz., in and about the neighbourhood of Jerusalem.

As far as I have learned the country, and according to the studies I have made on this subject, I draw the boundary line as follows:—According to Joshua xv, 5, and xviii, 19, the boundary began towards the east at the "bay" of the sea, or the small peninsula at the mouth of the Jordan—exactly speaking, from the mouth of "Khaur el Kutuf;" it went in a north-west direction over to the "Khaur (or ravine) Wâdy

Makarfet," to the point where it breaks through the old bank of the river, and then along this ravine to a point having "Beth-hoglah" in some distance opposite in the *north*. This town¹ was, as I am persuaded, situated at or near the present "Kusr Hajleh," and the spring, north-east of it, had the name from the town. The triangle-shaped tract of land, lying between the Jordan—the base line—and the lines in the north, the old bank of the river; in the south, Benjamin had the already mentioned boundary line, called by the Arabs "Ez Zôr" (forming the two other lines). It is called "Ez Zôr," as every one passing through it has to do with difficulties; and it is fatiguing, for the many water ravines and swampy places.

The boundary line went along this ravine, "Makarfet," further on to "Beth Arabah." The name "Arabah" is identical with the present word "Ghor" (a broad wâdy greatly depressed), and "Beth Arabah"² was the inhabited place therein. I think it is the present "Mekur es Sidr"—meaning excavations and caves in the slopes of the ravine—the boundary running in the bed of the valley; therefore the southern caves, or "Beth Araba," are belonging to Judah (Josh. xv, 61), and the northern to Benjamin (xviii, 22). It is to be understood that on the banks of the ravine may have stood also *built* houses, embraced with some fence.³ The line went in the ravine up to the foot of the mountains, and there to the "stone of Bohan," a "white-striped rock," on one of the first heights—I think the one on which foot the Wâdy "Makarfet" comes out, and another smaller one enters into it. From here the line went into the valley of Achor (verse 7). "Valley Achor" was in the neighbourhood of Gilgal (Josh. vii, 24–26), and I am convinced it is the "Wâdy Umm el Bucimat," meaning the "mother of the door of death;" and the Rujm "es Shemâliyah" there is the heap of stones the children of Israel put over Achen and his family. Rujm Shemaliyah means the "northern heap" of stones, in opposition to another one in south, called the "Kebliyah," or southern. "Achor" means "trouble," grief, and "sorrow," and the present name implies the same idea; but there are promises (Hos. ii, 15, and Isa. lxxv, 10) of a better time. Some consider the Wâdy Kelt to be the "valley of Achor;" but this cannot be, for the Kelt is a narrow, deep gorge, with a river bordered with bushes and thickets, and certainly not convenient (nor advisable) for the executions of people—this wants a dry (broken) valley; and further, the Kelt is too near to the northern boundary of Benjamin and Ephraim according to Joshua xvi, 1, 2.

Verse 7 is in the Hebrew (and in all the translations to which I had access, which differ greatly) very difficult at first. But one has to keep in mind that here the line went through a complete wilderness, and so no names or places could be mentioned, till it came to cultivated land, full half-way up to Jerusalem, and there is "Debir" mentioned, a town,

¹ Hieronimus gives it three miles from Jericho, and two miles from the Jordan.

² Compare Joshua xviii, 18, where the German Bible gives "Gefilde."

³ And so forming a town.

or village rather—as in the enumeration of towns Debir is not mentioned (the one spoken of in Joshua xv, 49, is near Hebron)! Between the “Valley of Achor” and “Debir” “Gilgal” is mentioned in Joshua xv, 7, which is given in the parallel passage more completely as “Geliloth” (Josh. xviii, 17), meaning the round conical white chalky hills, which are numerous in this wilderness, and distinct from those at Jericho or on the banks of the Jordan (Joshua xxii, 10, who therefore said: those which are at the “ascent to Adunim, which is on the south side of the river,” thereby clearly describing the chalky hills, and above the high group of red looking hills, on which are the ruins of an ancient fort¹ and of a Khan called “Khan Hathrûrah;” and which place is generally taken as the Adunim by all writers. West of them, a more level tract of land, and already cultivable, is called “Thoghret ed Debr,” which Rabbi Schwarz translates the “meeting-place of Debir,” referring to one of the stations, where the Israelites went up to Jerusalem for the feasts. The name is taken from the neighbouring Debir.

Debir must therefore be sought in the neighbourhood of this place. Half-an-hour south of this plain, in the same valley (but lower down), where several valleys unite, we find on the map “Umm el Rujm,” *i.e.*, the *mother of stone heaps*, and this place I consider to be the ancient Debir, and belonging to Judah, as the boundary coming up from the upper end of the valley Achor (which for a time has in its upper part a north direction, and the white chalky hills above its upper termination to “Adunim,” nearly along the present road to the neighbourhood of Debir to the present “Thoghret ed Debr.” Its name is derived from the neighbouring village from here (Debir or “Umm er Rujm”); the line went westwards, up the valley, and finally to the Water en Shemesh, and further on to En-Rogel (verse 7). En-Rogel is generally believed to be, and is without question, the present Bir Ayooob below Jerusalem. But where is En Shemesh? Robinson, and many others following him, think to find it in Ain Nond east, below “Azirieh,” or Bethania. But the name does not agree, and so we must look for another one elsewhere. The name “Es-Shemesh” occurs in this district three times. The first is a cave, “Mogharet es Shems,” north of the Wâdy Kelt, opposite the Khan Hathrûrah, and cannot be the place looked for; the other is a rock, “Arak es Shemes,” south of the Jerusalem road, and from Thoghret ed Debr half-way up to Jerusalem: it is not the place looked for. The third is the site of an ancient village or town north of Jerusalem, east of the Nablus road, called now “Khurbet Soma,” *i.e.*, the “Ruins of Sama.” In this word we find the original root of the word “Es Shemes”—and many other reasons make me believe that this site is the ancient “En Shemes,” although there is now no spring, or ¹Ain, but only a very large cistern, which was formerly an open pool!² We must remember that in this district there are to-day

¹ Talat ed Dumm.

² It is to be remarked that the text does not say Ain Eshemes, but the “waters of Es Shemesh.”

only a few springs. It is clear that many former springs have in course of centuries entirely dried up, or now only flow a short time, after heavy rains; of this sort I know a great many. So it may have happened with the "En Shemes." Further, the words "Ain" and "Beth" are so often mentioned in the Bible, and also amongst the Arabs of this day, that they appear often synonymous, so that one is sometimes used for the other. Joshua xv, 10; 1 Samuel, vi, 12-20, is "Beth Shemes," now called by the natives "En Shemes," although there is no spring. And so may "Khurbet Soma" in Joshua's time be called "En Shemes;" afterwards, in the time of the Kings, it was called Beth Samys, and so the Septuagint has it throughout.

In 2 Kings xiv, 11-13, and 2 Chron. xxv, 11, we read, that Amaziah, King of Judah, would not hear advice; so Jehoash, King of Israel, made war and came up, and both kings "looked one another in the face at Beth-Shemesh, which belongeth to Judah," and Amaziah was beaten, captured, and 400 cubits of the walls of Jerusalem (in the northern direction) was broken down by Jehoash. It is evident that *this* Beth-Shemesh cannot be that above-mentioned, situated in the plain; for the distance from Jerusalem is too great, and no reason can be found to transplant this skirmish there; but, which was quite natural, Jehoash went over the boundary, marching towards the capital, Jerusalem (this boundary being a few hours north of Jerusalem, at Bethel), and when Amaziah heard this he went also out against him, and they met one another on the high flat ground at Khurbet Soma, the ancient Beth-Shemesh, near Shafat. To such a conclusion there are good reasons. I draw, therefore, the boundary line from Debir (in the neighbourhood of Khan Hathrûrah), first westwards up the Wâdy Sidr, along the Jerusalem road, till, at the point where the latter crosses over a ridge to a more southern valley, the line remaining still in Wâdy Sidr, and going along the traces of an ancient Roman road, to the place Deir es Sidd, and then up the Wâdy Sulim, up to the Khurbet Sôm'a; the ancient En Shema, and from here, bending at a right angle, southwards along the Nablus road to Jerusalem, and through the Damascus gate down the Wâdy (Tyropœon) to En-Rogel or Bîr Eyûb. In doing so, Jerusalem becomes cut in two parts: the eastern part belonging to Judah, the western to Benjamin. That such a line is correct we see from the parallel passage, Josh. xviii, 16, 17, where it is clearly stated, that from En-Rogel (verse 16) it went northwards to "En-Shemesh," which, therefore, fully agrees with the present Khurbet Sôm'a. That Jerusalem was divided to the two tribes we learn also clearly from the Scriptures, Josh. xv, 63; it is said: "The children of Judah could not drive out the Jebusites, but dwelt with them unto this day;" but in xviii, 28, we find Jerusalem enumerated among the cities of Benjamin, and said to be Jebus (compare also Judges xix, 10, and 1 Chron. xii, 4). So these passages seem one to contradict the other, when Jerusalem will be taken as a whole allotted only to one tribe, and one finds many and curious explanations of the commentators to reconcile these passages. All difficulty falls away when the boundary is drawn as I have done. That both tribes had part of

Jerusalem, the Talmud also states, and hence Rabbi Schwarz makes the Tyropœon the same thing as the Valley of the "Son of Hinuom," and the latter to the "valley of the giants," or Rephaim, but nothing of the following agrees with the state of things.¹ The Talmud says that the boundary line went even through the Temple, and over one corner of the altar of burnt-offering,² so that the Temple proper was situated in Benjamin, and quotes Gen. xlix, 27. But one would think the blessing to Judah, Gen. xlix, 8-12, would rather indicate the government and central point of the people, which was the Temple, to Judah. So in the chief point, that the boundary went through the town, they are right, but in the minute details they fall, according to my understanding, under the sentence (Mark vii, 8), "and many other such-like things ye do."

From "En-Rogel" (Bîr Eyûb) the boundary went (according to verse 8) up in the valley of Ben Hinuom, on the south side of the Jebusites, to the "top of the mountain lying to the west," at the point where the valley makes a sharp bend towards north—this mountain was situated on the north end of "Rephaim" over the "valley of the giants," and by this we see it is the present "Ras ed Tabus" (south-west of Jerusalem). From here the line went to the "waters of Nephtoah," generally, and with good reasons, considered to be the "Ain at Lifta." It may appear strange that in verse 8 and beginning of verse 9 the several points are one so near the other—as in the rest of the description generally, are of great distances. But this is quite natural, just as here was Jerusalem and the centre of the people, and two tribes having shares in its territory, the boundary had to be given very exactly and minutely. The more so as, at that time, the two inhabited parts were small places or towns, yet both belonging to the Jebusites! Further, it was necessary to state minutely, as the line made at En-Rogel a sharp angle, which otherwise would not have been properly understood. From the "waters of Nephtoah" the boundary went on to the cities of Mount Ephraim (*i.e.*, Ephraim) to Baalah and Kirjath-Jearim" (verse 9). It is easy to be traced from Lifta down into the valley ("Wâdy Beit Hannina"), and westwards along it till "Beit Tulma," where the valley bends towards south, and as it is said "went to the cities of Mount Ephron"—it is clear that this valley formed the boundary between the mountains of Judah and the mountains of Ephraim. From "Beit Tulma" the line ascended the slope of the mountains, left "Khurbet Beit Mizza," the ancient "Mirza," to the right in north as belonging to Benjamin (Joshua xviii, 26); also the old Weli, or monument, "Abd el Aziz," a very ancient-looking place, with a monument as in other "Mukams," and the "Kubbet Rahil," near Bethlehem, and is overshadowed by very old trees; close by it is a tank and some ruins of former buildings. The present name, "Abd el Aziz," is a modern and a Moslem one, but I was told the place is also sometimes called "Kubbet Rahil" (= Tomb or

¹ Talmud, Sebachim, liii, 2; Joma xii, 1.

² Even in this way the *eastern* part will belong to Judah, and so on, contrary to his own statement.

Monument of Rachel), and I think it is the one situated at the boundaries of Benjamin (1 Sam. x, 2), and distinct from that near Bethlehem where Rachel died—and is in the tribe of Judah ; for the Benjamites made also a monument for their mother in their own ground, as I believe, and this would be it, as I have pointed out in an article on “Saul’s Journey” (1 Sam. ix, &c.), which appeared in a German paper.¹ North of this place are the ruins of “Rume,” and south some others, not entered in the large map, and Kustul ; and westwards many other cities of Mount Ephraim. The line went from the top of this ridge downwards to “Ikbala,” near south of the main Jerusalem—Jaffa road—it is situated at a spring in the valley, and forms a very idyllic corner of the earth. I consider it as a former place of “Baal,” and from here the line went up to the town “Kirjath-Jearim.” The text connects them both, which I explain so : that “Ikbala” has been the place for worship and for national feasts, the town itself was more west of another spring situated higher up, viz., the present “Abu Ghoosh ;” it was at the time surrounded by forests or thickets, therefore its name “Jearim,” but since this, thickets have disappeared, and reduced more west, and so it bears now the name “Anab,” “Kuryet el Anab,” = “town of the grapes,” as there are now very fine vineyards.”

Robinson and others, not knowing of a second “Kubbet Rahil,” tried to draw the boundary line from the top of the mountains, west before the valley of Hinnom—in another direction as I have now described, and having gone over to Lifta—they trace a more southern route, in order to come nearer to Rachel’s tomb, near Bethlehem. Robinson mentions, therefore Ain Yâlo (below Malnah) and also Ain Korius to be the waters of Nephtoah. But against such a supposition must be placed their *names*, and those are at too great a distance from Rachel’s tomb, the first three-quarters of an hour, the latter fully one-and-half hours, a distance even greater than Rachel’s tomb is from Jerusalem ! So this will not do, and therefore Captain Conder goes on to say that the waters of Nephtoah² are the springs in the neighbourhood of Solomon’s Pools, beyond (south of) Bethlehem. First the meaning of the word Nephtoah, implying a group of springs, and those can only be found at Solomon’s Pools ; and secondly, the boundary would then run over close at Rachel’s tomb ; and thirdly, quotes the Talmud giving Nephtoah as Etam. Agreeable as all this looks, it is open to great objections.³ The name is missing, but this may be of little consequence ; the great difficulty is, how to draw the line to Kirjath-Jearim ? which then cannot be taken as Abu Ghoosh ; and Conder therefore substitutes a Khurbet Erma, about two hours in south-west of Abu Ghoosh (or the above-fixed Kirjath-Jearim). By such a line, the tribe of Judah loses a great tract of land in favour of Benjamin, and further, the greater part of the cities in the Septuagint described to Judah,⁴ viz.,

¹ “Zeitschrift des Deutschen,” Pal. Vereins, 1881, page 247.

² *Quarterly Statement*, 1879, pp. 95–99.

³ Joshua xv, 60.

⁴ Several of these are made by W. F. Birch (*Quarterly Statement*, 1882, p. 61), which I will not repeat.

Sores (= Saris), Canen ('Ain Karim), Galem (B. Jala), Bether (= Bittir), Monoch (= Mallah), will fall to Benjamin ! And then he finds no Mount of Ephron, which certainly means simply Ephraim, as I took it in the above. Further, if even the Khurbet Erma would be taken as Kirjath-Jearim, the line further on of the boundary will not do, although he traces it, but without any probability ; its line goes backwards, crossing twice one and the same valley ; whereas, when Abu Ghoosh is Kirjath-Jearim all comes right. To point out this it is necessary for me to explain this, although the last of the tribe of Benjamin ended at Kirjath-Jearim, and so, strictly speaking, the further line would not fall under the headings of this my paper.

From Kirjath-Jearim the line went westwards to the Mount of Seir; this is apparently Saris,¹ and passed along unto the side of Mount Tevrin, which is Chepalon. The long ridge from Abu Ghoosh to Eshnah is, according my conviction, the "Mount of Jearim," the mount of thickets, as it is still to-day to a great extent. The line from Abu Ghoosh westwards went therefore (about) along the present Jaffa road, and passing north of the village Saris—not further following the road and telegraph line down the valley, but crossing the ridge in west of Saris, in a southern direction, and going down on the side of Mount Jeram into the Wâdy el Hamar to Chessalon, the present Kessla, which is on its south side. So to the north of it the valley and boundary run down, remaining in it till Beth-Shemesh, and going further on to Timnah (verse 10), where all is clear and correct.

There is no crossing of any valley ; but the boundary is quite a natural one, and all expressions in the text come right, so I should think this is correct, and hence Abu Ghoosh is Kirjath-Jearim, and Lifta the Nethtoa, and Khurbet Sôm'a the En Shemes in the mountains, Umm Rujm Debir, and the chalky hills Geliloth, and so on.

Jerusalem, February, 1884.

C. SCHICK.

ARCHÆOLOGICAL DISCOVERIES IN THE HOLY LAND AND SYRIA IN 1883.

(Reprinted from the Times).

I. DISCOVERY ON MOUNT GERIZIM OF A MARBLE PEDESTAL, ORNAMENTED WITH BAS-RELIEFS AND INSCRIPTIONS.

ABOUT the middle of last year an important archæological discovery was made in a celebrated locality of Palestine which had not previously supplied us with anything particularly interesting in the way of antiquities. Some works undertaken by the Ottoman authorities for the construction of a building at Nablous, the ancient Shechem, at

¹ The line passed not to the town but to the Mount of Saris, which is exactly the case when following the present road, on the ridge of the hills.

the foot of Mount Gerizim, brought to light a considerable number of fragments of sculptured marble. Among these was found a large pedestal of marble, about a mètre in height, triangular, or rather hexagonal, in shape, with three broad and three narrow sides, covered with bassi relievi and Greek inscriptions. M. Paulus, a talented sculptor resident in the Holy City, and the Governor of Palestine, His Excellency Raouf Pasha, whose enlightened zeal cannot be too highly praised, and who has taken steps to secure the preservation of this beautiful monument, kindly sent me as soon as possible different photographs of it. These I immediately communicated to the Academy of Inscriptions and Belles-Lettres with some explanations, which up to the present time have remained unpublished, and which the public may perhaps be glad to receive. The real use to which this pedestal was meant to be applied is not certain. It recalls to mind the triangular altar-shaped pedestals of certain ancient candelabra, which are in like manner ornamented with sculptures. On one of the broad sides, quite at the top of the cornice, a Greek inscription of five lines is engraved. I have been able to decipher a portion of it, in spite of the smallness of the photographic reproduction and the shadow cast by the cornice, which hides many of the characters. It is a metrical inscription. On the narrow side, to the right of the preceding side, is engraved another Greek inscription of nine lines, which is absolutely undecipherable in its present state, the characters being not only on a microscopical scale, but, in addition, distorted by the perspective.

Each of the three large sides is divided into two compartments, in which are sculptured in bas-relief different scenes taken from the Hellenic mythology, viz., six subjects in all. Several of these scenes are accompanied by short Greek epigraphs, engraved in the field, giving the names of the principal personages who are engaged in the scene represented. The three lower scenes, which are the most distinct and the easiest to identify, belong to the cycle of the legend of Theseus. They follow one another in a relatively logical order. In the first we see the young hero raising the stone under which are hidden the sword and the shoes of his father Aigeus; three women, including probably his mother, are taking part in the scene. In the second, Theseus is in combat with the Minotaur, who may be recognised by his bull's head; on one side are the young Athenians, whom Theseus has come to set free, and a kind of cavern, indicating the monster's den; in the field I noticed the traces of an inscription, giving the name of *Meinotauros*, in the accusative. In the third, Theseus has triumphed over the robber Corynetes, who is stretched at full length at his feet; the conqueror, erect, appears to be leaning on his own club and holding the iron club of the robber of Epidaurus; three other persons, so much mutilated that they cannot be with certainty identified, are standing by the side of the robber's corpse. I pass now to a description of the upper compartments. The first of them shows us Artemis, Apollo, and Latona, with their names inscribed above their heads; on the right is the serpent Python, his

head pierced with an arrow discharged by the divine archer. In the second scene a personage, probably Demeter, passes to the left, mounted in the celebrated car drawn by serpents. Another woman, lying in the shadow of a tree that crowns a height, and leaning on her right elbow, holds a palm or a cornucopia and has a garland of flowers on her breast; it is perhaps an indication of the country personified, or the representation of a telluric divinity. In the third upper scene, which appears to have greatly suffered, and which is imperfectly given in the photograph, a manly personage is seen, probably Hercules, half-kneeling down and contending with two serpents. To the right and left two women are hurriedly fleeing from the place of combat.

Such is, in a summary form, the description of this very curious monument, which derives its chief interest from the place in which it was found. It belongs to the Græco-Roman epoch, and must have come from the Pagan temple which was erected on Mount Gerizim, and which is so frequently reproduced on the Greek Imperial coins of Neapolis. By what association of ideas did these Greek legends come to be localised at Neapolis? It appears that the ancients had established between the ancient Shechem (transformed at the Græco-Roman period) and Athens one of those assimilations more or less arbitrary which were customary with them. I will confine myself—without insisting on my contention—to pointing out three concordant facts in support of this suggestion. On the coins of Neapolis the Mount Gerizim, the Temple which surmounted it, and the grand monumental staircase which are represented, recall to mind, in a singular manner, the monetary representations of the Acropolis; the greater part of the scenes figured on our monument are borrowed from the Attic cycle (Theseus and Demeter); finally, Attica is certainly mentioned in the inscription. In order to pronounce an opinion definitively on this point, and on other secondary points, it will be necessary to wait for better reproductions of the monument. Above all, the inscriptions must enlighten us, by informing us in what conditions it was dedicated. I have asked for “squeezes,” which I trust will enable me to settle this question. In the meanwhile, this monument remains none the less one of the most interesting which has been hitherto found in Palestine. It is much to be regretted that the occasional excavations which led to its discovery have not been resumed and continued in a methodical manner, as they might produce results of the greatest importance.

II. DISCOVERY OF ANTIQUITIES AT EMMAÛS NICOPOLIS.

The discovery of the bilingual inscriptions of Gezer has permitted, by consequence, the determination with a mathematical certainty, so to speak, of the position of the ancient Emmaüs Nicopolis at the Arab village of Âmwās, situated on the road from Jaffa to Jerusalem, between Ramlé and the point where the road penetrates into the mountain mass of Judah. Âmwās is one of the points of Palestine where excavations might be made with fruitful results from an archæological point of view. Already at the

time of my last mission in 1881 I collected there some interesting monuments, among others some Roman inscriptions and a marble capital bearing a curious inscription, and coming probably from the very ancient basilica which was erected at Emmaüs. This inscription, incontestably Christian, was in effect bilingual, Greek and Hebrew—"One only God! May His name be blessed in eternity!" The Hebrew part, strange to relate, was in archaic characters, analogous to those of the Jewish shekels. If the stela of Mesa may be considered as the Alpha of Hebrew epigraphy, the capital of Âmwās may with good reason pass for its Omega.

Since my departure some excavations undertaken for pious purposes by a French lady, Mademoiselle de Saint-Cricq, have been carried on under the direction of Captain Guillemot in the ruins of the basilica of Âmwās, already excavated by me in 1874. They have led to new finds which M. Guillemot has kindly communicated to me,—a cruciform baptistery; fragments of a vase in terra-cotta with a handle in the form of a cross, and the invocation, "Lord! remember (thy servant!);" a fragment of the lid of an ornamented sarcophagus; an ancient quarryman's bore; fragments of funereal inscriptions in Greek, &c. But that which specially deserves to be noticed is a discovery which has realised one of my predictions. I said in one of my first reports on my mission of 1881 (p. 33), in discussing the difficult problem of the dedication of the basilica of Âmwās:—

"Then is then, in my opinion, among other chances, that of finding some pavement of historical mosaics, perhaps accompanied by inscriptions which will inform us more fully as to the past history and the origin of the church than all the suppositions to which we are at present confined."

The excavations of M. Guillemot have, in fact, brought to light a mosaic pavement close by one of the apses of the ruined church. This pavement contains an inscription, unfortunately much mutilated, but the general sense of which can be gathered. "The mosaic work of the church of . . . under the episcopate of . . . the day, the month, the year." One may compare, among others, the tenour of the dedications of the mosaics at Tyre and Neby Younès. It is much to be regretted, however, that it is the very parts of the dedication which contain the key to this historical enigma that have disappeared.

Another interesting discovery made at Âmwās is that of a Jewish sepulchre, inviolate, cut in the rock, according to the habitual plan; a square chamber with nine *loculi* or *koukim* disposed three on three of the walls; in the centre were two ossuaries or *osteothèques* in the form of *caissettes* in limestone, surrounded by large vases in terra-cotta and phials commonly called lachrymatories.

III. VOTIVE PATEN DISCOVERED ON THE MOUNT OF OLIVES.

On the eastern slope of the Mount of Olives there has been found an interesting specimen of Christian archæology in Palestine. The Archimandrite of the Russian mission at Jerusalem, into the possession of which

it has entered, has kindly sent me a “squeeze” and a copy, which have enabled me to interpret it.

It is a disc of greenish bronze of 13 centimètres in diameter, mounted on a kind of little foot. In the middle a large cross is cut with equal branches, on which are engraved five characters, thus arranged :—

Φ
Z Ω H
C

which I read Φως, Ζωή, “life, light,” those two sacred words denoting the two essential qualities of Christ. All round there is engraved a long Greek inscription, a little damaged in certain places, which I propose to translate thus :—“Mary (or Martha ?) receive the offering of those whose names the Lord knows.”

I believe that this little object represents to us a paten—the *diskos* of the Greek Church, on which were placed the particles of the eucharistic bread, the “living coal” (compare “life, light”) to which the Oriental liturgies liken this symbol of the body of Jesus.

IV. DISCOVERIES OF INSCRIPTIONS IN THE LEBANON.

M. J. Löytved, Danish Vice-Consul at Beyruth, who engages with zeal and success in researches on Syrian antiquities, has communicated to me reproductions of a series of inedited monuments which deserve a special mention.

These are, first of all, three Roman inscriptions coming from the ruins of Deir el-Kalá, at Beit Meri, in the Lebanon. This locality has already attracted the attention of archaeologists by the existence of an ancient temple dedicated to a certain Phœnician god—Baal-marcod, who appears, as the etymology of his name indicates (*rakad*, to dance); and by the very tenour of certain inscriptions already known, to have presided over dances. The first of these new texts is a votive inscription made to Juno Oricina by Caius Julius Maximus :—

IVNONI ORI
CINAE C IV
LIVS MAXI
MVS FECIT
V.L.(M).S.

The second is the dedication of an altar offered to the well-known Roman goddess Mater Matuta, on the reply of an oracle of Juno, by a woman, Flavia, daughter of Titus, Nicholais Saddane :—

MATRI.MATVTAE
FLAVIA.T.FIL.NICOLAE
SADDANE.(ANTISTI)
VETERIS.EXPRESPONSO.
DEAE.IVNONIS.ARAM
FECIT.DEDICAVITQVE

The interpretation of the third line presents certain difficulties, but this is not the place to stay and discuss them. I would remark, however, that if *Saddane* is really, as it appears to be, the proper name of a woman, it approaches very near to the name of the Queen *Saddan* engraved in Syriac and in Hebrew on the sarcophagus coming from the tombs of the Kings of Jerusalem. I have already had occasion to say that I considered *Saddan* as the Semitic and national name of Helen, Queen of Adiabene. It is not impossible that the Flavia, daughter of Titus, of Beit Meri, was attached by the ties of parentage or enfranchisement to the royal family of Adiabene, several members of which, after the taking of Jerusalem by Titus, may have become adherents of the conqueror and entered into the *clientèle* of the Flavians on taking their names, following the ancient usage. This is what the Jewish historian Josephus himself did when he adopted the surname of Flavius.

The third inscription of Beit Meri is a dedication engraved on a stone over a window :—

EX. VOTO. M. TITTI. RE...

M. Löytved has sent me besides the drawing of a large Roman inscription engraved on the rock between the 16th and 17th kilometres on the road from Beyrouth to Damascus. Unfortunately, 't is too damaged to be deciphered with certainty. It will be necessary, that it should be examined on the spot by a skilled epigraphist. I believe I recognise here the mention of the *Colonia Damascena*. I point it out to the attention of learned tourists who may have the opportunity of travelling in those parts.

V. NEW INSCRIPTIONS IN HAURAN.

M. Löytved sent me also the copy of four Greek inscriptions collected by him in Hauran. They appear to me to be unpublished, and they ought to be added to those, already numerous, which M. Waddington, our present Ambassador in London, found in the ancient Auranitis. The first comes from Numr, a locality situated at an hour's distance to the south-east of Harra, and not marked on the maps. It is engraved on a small altar, on which has been traced, at a comparatively recent period, a large cross. It is the dedication of the monument made by a certain Zenon, son of Kadmos. The second name is interesting. I showed a long time ago that that of Zenon, frequently borne by Phœnicians of the Greek epoch, was the Hellenic equivalent of a Semitic name, composed with the name of Baal. The second inscription comes from Numr. It is only a fragment containing thirteen lines. It appears to me to have reference to the erection of a boundary-stone marking the limit of two ancient villages, whose names are given, but are badly preserved (one of them appears to be Namara). The other two inscriptions come from Djasim, a small locality, also situated in Hauran. They are both Christian, and one appears to contain a passage taken from the Greek version of the Psalms.

A little later on, M. J. Löytved sent me the copy of twenty-five new Greek inscriptions, collected by him during his tour in Hauran, in company with M. P. Schroeder. They come from various localities of Auranitis, from Trachonitis, from Batanæa, and from the ancient Nabathæan kingdom. Amongst them I point out an inscription dated the year 5 of Hadrian (at Ahiré in Trachonitis); an inscription of a soldier having belonged to the Third Legion (at Soneida of Batanæa), an inscription dedicated to Marcus Aurelius Antoninus, mentioning the theatre and the city of Bostra, a stela dated the year 95 from the foundation of the city (at Irbid).

VI. ARABIC INSCRIPTION ANTERIOR TO MOHAMMED.

Knowing that M. Löytved was about to undertake an excursion in those parts of Syria, I urgently requested him to have the goodness to take for me the "squeeze" of an extremely important text, which, up to the present time, has only been known to us by copies, due to MM. Wetzstein and Waddington—copies still leaving room for doubts, in spite of the care taken by their authors. It is a bilingual Greek and Arabic inscription engraved on the lintel of an old chapel or *martyrion* at Harran, in the Ledja. That which gives special interest to this inscription of three lines, mentioning the construction of the *martyrion* in honour of St. John, by a tribal chief or phylarch, "Asarahil, son of Talemon," is that it is dated with an entire certitude after the local era of Bostra, the year 463 corresponding to the year 568 A.D. Then it results from this that the Arabic portion, written in pure Neski, is anterior by fifty years to the Hegira, and consequently engraved before the birth of Mohammed. During the last ten years I have pointed out the *desideratum* to all the persons of my acquaintance who had the opportunity to explore this region, but without success. M. Löytved has had the kindness to do what I could not obtain from his predecessors, and he has just sent me a very good impression of this precious inscription. Thanks to this document, I hope soon to be in a position to cast a new light on the most controverted parts of the inscription of Harran, and I am glad to take this opportunity of thanking M. Löytved for the great service which he has rendered to science in this matter.

VII. SPURIOUS PHœNICIAN INSCRIPTION ON A BRONZE FIGURE IN THE BRITISH MUSEUM.

I have just noticed in the show cases of the British Museum a curious little monument which was acquired this year, and which, it seems, ought to be classed in the catalogue, already so rich, of the false or falsified antiquities of Syria. It is a little bronze representing a quadruped—a deer apparently, or, better, a hind—of about $2\frac{3}{4}$ inches in length. It is pierced right through, from the back to the belly, by a hole, which must have served to fix it on another object. The feet are broken. This little figure, brought it is said from Tartus, is certainly genuine. But that which is not genuine is a Phœnician inscription of five characters which it bears engraved on the left side, and which I read *Gadyaton* (the proper

name of a man, which signifies literally *Gad has given*). It has a good Semitic physiognomy and sureties in the collection of Phœnician proper names. Nevertheless, it must have been engraved afterwards by a modern forger, upon the little figure, in order to increase its market value. The forger must have been inspired with the legends on certain Phœnician seals. The letters have a stiffness, which betrays a modern hand. The graver has, in places, exfoliated the pellicle of the antique oxide, and, in spite of the precautions taken to cover over the engraved lines with an artificial patine, one can perceive here and there brilliant points of the metal.

VIII. DISCOVERY OF A FRAGMENT OF AN IMPERIAL INSCRIPTION AT JERUSALEM.

In the course of the summer of 1883 excavations were undertaken, under the direction of the Archimandrite of the Russian Mission at Jerusalem, in the vast tract of ground belonging to the Russian Government and situated east of the Church of the Holy Sepulchre. This point is one of the most interesting to explore for the topography of the Holy City, because there is a chance of finding traces there of the second enclosure wall, a problem with which the authenticity of the Holy Sepulchre is intimately connected. I myself made there, during my mission of 1873-4, some excavations which have led to certain results.

The Archimandrite, in a letter dated the 27th of December, 1883, informs me that the new works which have just been undertaken have brought to light the threshold of a large antique door and a fragment of a Roman inscription. It is a piece of flagstone 0·50 mètre in length by 0·41 in width, with these characters :—

IMP
PART . . .

The word IMP[ERATOR] evidently indicates that we have to do with an Imperial inscription. The surname of PART[HICUS] can only be applied to Trajanus, who first assumed that title after his expedition against the Parthians, or to one of the Antonini who bore the name after him.

NEW FORGERIES AT JERUSALEM.

For some little time past the forgers at Jerusalem appear to have applied themselves to the cultivation of another branch of industry. I say “for some little time past,” because in the year 1880 there was no question of it at Jerusalem, and if the industry had existed, some product of it would certainly have fallen into my hands during my stay in Palestine at that period. I refer to the manufacture of terra-cotta lamps.

The forgers have had the ingenious idea of imitating those little antique lamps, belonging for the most part to the Christian epoch, which have been found by hundreds in Jerusalem and its neighbourhood.

Several of them—I am speaking of the authentic ones—bear very curious Christian symbols, and some of them even Greek inscriptions, the first specimen of which I made known in 1868. They are pious eulogies, such as ΦΩC ΧΥ ΦΕΝΙ ΠΑCΙΝ—"the light of Christ shines for all;" ΔΥΧΝΑΡΙΑ ΚΑΛΑ—"beautiful lamps," &c. This latter epigraph has the advantage of giving us the very name of these lamps, of these *lychnaria*, which probably served as well for profane as for sacred purposes.

Nothing is more easy than to counterfeit these little *lychnaria* which were cast in rude moulds. The two portions—the upper and the lower—were moulded separately, and they were then put together before the baking of the clay. I discovered and brought away with me several of these antique moulds used in Palestine.

I do not know whether the forgers have made use of upper castings (*surmoulages*), or whether they have reproduced in their entirety certain models which they can hardly have failed to procure. At all events, they have put in circulation a considerable number of false *lychnaria* and have multiplied them in abundance, thanks to the expeditious process of moulding imitated from the ancients. In order to make the fraud more profitable, they have ornamented their wares with fancy inscriptions. Having once set themselves to this task, they do not do things by halves. Greek Christian inscriptions, like those which are already known, were but small beer for them. Hebrew inscriptions, if you please!

Here, for example, is a little clay *lychnarion* which is worth its weight in gold. It is circulated at Jerusalem in several copies, and I recommend it to tourists. On the upper part is represented a palm tree, separating into two sections a group of four archaic Hebrew letters, which are read without difficulty—"Simeon." The counterfeiter has simply copied the complete type of the reverse of one of the Jewish coins struck during the last revolt. It is the coin which is ordinarily attributed by numismatists, though the correctness of the statement is open to discussion, to the famous Barcochebas. A lamp with the name of the Jewish hero! That is indeed a "wonderful lamp." Unfortunately, here Aladdin probably calls himself Selim el-Kari, and it is with the story of the Forty Thieves that we have to do.

I am informed from Jerusalem that there was found in a cavern near Hebron, during the summer of 1883, a quantity of terra-cotta lamps of the same type, description, and size, bearing on the upper part a similar inscription in illegible characters of Semitic appearance. Although this "find" [appears to me to be very suspicious, I suspend my judgment regarding it until I am more fully informed.

CH. CLERMONT-GANNEAU.

THE CITY AND TOMB OF DAVID ON ACRA, COMMONLY CALLED OPHEL.

“VERIFY your references,” said a great writer, especially, I would add, if you touch the Jerusalem controversy. Through neglect of this safe rule, in reference to the City of David, Captain Conder has fallen into a few errors, which in self-defence I must unmask.

(1) He claims the authority of Mr. Fergusson (*Quarterly Statement*, 1883, p. 194), in favour of Acra being west of the Temple, putting him into the same scale with Sir C. Warren. It is startling to find Mr. Fergusson (*cedere nescius*) thus in 1883 turned into a make-weight (against me) in favour of the *western* site, when in 1863 he wrote (*Biblical Dictionary, Jerusalem*) “in favour of the assumption that the hill Acra and the citadel Acra were situated on the *northern* side of the Temple.” If these words can be forced into helping Captain Conder’s theory, then one is reminded of Canon Williams’ exclamation: “Why, at this rate, any passage in any book will be sufficient in itself to settle the whole controversy!”

(2) Captain Conder rightly adheres to the opinion that Uzziah was buried on Ophel, but 2 Kings xv, 7 (as already pointed out), distinctly states of Azariah (*i.e.*, Uzziah) that “they buried him with his fathers, in the City of David.” Therefore the City of David, in whole or part, was on Ophel. What could be clearer? Captain Conder, however, does not admit this conclusion. He thinks (*Quarterly Statement*, 1884, p. 26), “that every passage in the Bible is satisfied, without its being necessary to place the City of David (on Ophel), in a practically impossible position.” Now he is an unsparing opponent of “final denial of some or other statements of the ancient accounts,” when Josephus is treated as untrustworthy. It is the more surprising, then, that overlooking, as it were, 2 Kings xv, a still more ancient account, he should put himself in one scale with the oldest record in the other, and then describe Ophel as an “impossible position.” Others will rather conclude that his theory is impossible.

(3) “*Sepulchres within Jerusalem transferred outside the walls.*” (*Quarterly Statement*, 1877, p. 134; also “Handbook,” p. 341.) The idea of a procession of Jews bearing in solemn pomp a rock-cut sepulchre out of the Holy City suggested difficulties. Accordingly a friend or two verified for me Captain Conder’s reference to the Tosiphta (Baba Bathra, chapter I), on which he builds his theory that the Tomb of David is probably to be identified with the Tomb of Nicodemus (so called), since the latter is “the only undoubted Jewish tomb in Jerusalem.”

It is quite time to verify this reference when Captain Conder can state that his theory “has been favourably received by many persons well acquainted with the history of Jerusalem,” a success which I have to own has not yet crowned any theory of mine. I reflect, however, that commonly the worse the error, the more it is believed.

Now as Captain Conder refers us to the Tosiphta, I presume he himself

is ready to stand by what it really says. Professor Theodores kindly gives me the following *literal translation of the whole passage*, which I beg to present as our contribution to the "Pilgrims' Text Society":—

"All graves are cleared except the grave of the king, and the grave of the prophet. Rabbi Akiba says: Even the grave of the king, and the grave of the prophet are cleared. Then people said to him: Were not the grave of the house of David, and the grave of Huldah the prophetess in Jerusalem, and never did a human being touch them. He said unto them: Hence it is shown that there was a passage for them by which the impurity was carried off to the brook Kidron."

Here first of all, as I half suspected (1883, 151) the Tosiphta says not a word about transferring (*i.e.*, transporting) sepulchres, but merely about bringing bones, &c., out of graves, as foretold in Jeremiah viii, 1.

The word פנה which Lightfoot had rendered by *remove*, is used in Genesis xxiv, 31, where surely Laban does not transfer the house to oblige Eliezer, but only prepares or clears it out; and again in Leviticus xiv, 36, where the plague-stricken house would hardly be transported to the priest, but rather emptied before he came into it.

Thus the rock-cut tombs which the Tosiphta implies had existed within Jerusalem are no doubt still in existence. Indeed, part of Ophel is, I believe, simply honeycombed with them. Therefore, if only one old tomb within Jerusalem is known at present, it does not follow that it is David's tomb, any more than a fresh tomb discovered near Jerusalem on its northern side is necessarily the tomb of Joseph of Arimathæa.

Further, Captain Conder finds in the tomb of Nicodemus ("Handbook," p. 342) a peculiarity answering, he thinks, to the description which Josephus gives of David's tomb. I do not myself detect the points of agreement; this, however, is of no moment, inasmuch as, if the tomb adopted by Mr. Conder be really David's, the Tosiphta supplies the missing link with a vengeance, in a *peculiarity three-quarters of a mile long*, for a passage from the tomb of Nicodemus to the Kidron could hardly be shorter.

Let us hope the Turks will permit some one to search for this passage, although I do not think it will ever be found. Yet what a triumph for Captain Conder if it could be traced to Tophet!

If he now rejects the Tosiphta, his theory at once falls to the ground, having no foundation left. As to the trustworthiness of the Tosiphta I need not give an opinion, as I rely for the true site of the City of David not on R. Akiba, but on Nehemiah. I will only point out that a position on the eastern hill is in the closest harmony with the tradition current among the Jews in the second century, while Dio Cassius speaks of the sepulchre of Solomon as collapsing in the reign of Adrian. Thrupp notes that the Paschal Chronicle relates that the sepulchres of David were entered from Gibeon twenty furlongs from the city. Can Gibeon be a corruption of Gihon?

After this successful sally on unverified references I invite the critics forthwith to make fresh approaches against Zion, the city of the *Gibborim* (Prov. xxi, 22) before the garrison completely demolishes the besiegers

lines, beginning with Colonel Warren's "Parallel" on his invisible Zion ("The Temple or the Tomb," p. 22).

If, however, my opponents, especially the R.E's., will accept the inevitable and join me, so much the better, as their professional skill would be most valuable in searching for the entrance to the Tomb of David on Ophel (so called).

Is it not to such work that the Committee are beckoned in the oracular couplet of an anonymous pilgrim?

"Est operæ pretium tumuli lustrare cavernas;
Regia monstrabit putre sepulcra lutum."

Zion Sought and Found, vol. i, p. 7.

This has been freely rendered—

'Tis worth your while 'mid Ophel's caves to pry;
'Here David sleeps,' his mouldering clay will cry.

NOTE ON JOSEPHUS AND THE LXX.

JOSEPHUS may have derived from the LXX his mistaken notion that Zion and the City of David, which are used as equivalent terms in the historical passages of the Bible, only meant just the same thing as Jerusalem.

This seems probable from the following :—

(1) In 1 Kings viii, 1, the LXX substitute *Zion* for *Jerusalem*.

(2) In 2 Chron. xxviii, 27, "In the city in Jerusalem" (Hebrew), which means "the City of David at Jerusalem," becomes in the LXX ἐν πόλει Δαβίδ.

(3) 2 Chron. xxv, 28, "In the city in Judah" (Hebrew) becomes in the LXX ἐν πόλει Δαβίδ. Possibly this was the true reading.

(4) In 1 Kings ix, 15, a confused reading may possibly give τὸν φραγμὸν τῆς πόλεως Δαβίδ as equivalent to the wall of Jerusalem.

Thus in saying that David called Jerusalem the City of David Josephus is totally wrong; but in saying that king after king was buried in Jerusalem, he is merely sacrificing the precision of the original Hebrew, which names the exact part of Jerusalem in which the royal sepulchres were situated, *i.e.*, in the City of David, or Zion (*Quarterly Statement*, 1883, p. 154).

W. F. B.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

It has been found more convenient to publish Professor Hull's popular account of his Expedition in a separate volume than in the *Quarterly Statement*, as was at first intended. This volume is now advanced, and will be issued as soon as possible. It is illustrated by many drawings and sketches, and will be the first complete account ever published of the great valley known as the Wâdy Arabah. Professor Hull's Geological Memoirs will follow later on.

We are able to give in the present number Major Kitchener's paper on the geographical side of the Expedition. This is accompanied by a section of the Wâdy Arabah drawn by Mr. Armstrong. The paper has not had the advantage of Major Kitchener's corrections, but is supplemented for purposes of clearer understanding in parts by extracts taken from Professor Palmer's "Desert of the Exodus." Major Kitchener is now, as is known to everybody, at Dongola.

The new maps showing both the east and the west side of the Jordan are nearly drawn and completed for the engraver, but it is as yet impossible to state exactly when they will be ready. Sir Charles Wilson, who was to have superintended their production, is now in Egypt, and it is impossible to say when he will return.

With regard to present and future survey and exploration work in Palestine, the Committee are engaged in considering certain proposals of which it would be premature to speak here. But as regards work at home that requires funds, it must be remembered that we have in hand, as yet unpublished, the following works:—

- (1) Captain Conder's Memoirs of the Eastern Palestine Survey, so far as it has been completed. These are much more voluminous than the Memoirs written by him for the other side, and are accompanied by many hundreds of drawings and plans. The cost of producing them will be not less than £1,500.
- (2) The drawings executed for M. Clermont-Ganneau by M. Lecomte ten years ago. These are chiefly architectural, and are of the greatest beauty and value. It is estimated that they could not be produced at a cost of less than £1,200.
- (3) Professor Hull's Geological Memoirs, which are not yet completed.

We have, therefore, plenty of work before us, even supposing that we do not get the Firmân required for the continuance of the survey of Eastern Palestine. Perhaps it may be found desirable to publish the first two of these works by special subscription.

The last two volumes and the Jerusalem Portfolio of the "Survey of Western Palestine" are now in the hands of the subscribers. *The Committee will be very much obliged by the payment of any subscriptions due.* It must be understood that none of the volumes will be reprinted except the "Flora and Fauna," and the "Jerusalem" volumes, the type of which is kept standing.

As for the copies which remain, it is much to be desired that they should be taken by public libraries, and the Committee will be very glad if their subscribers will cause the work, of which only a few copies remain, to be taken by any library as yet without it.

Dr. Wright's much expected book on "The Empire of the Hittites" is now ready.

In 1872, at the suggestion of Mr. Drake, Dr. Wright, then living in Damascus, secured for this Society plaster casts of the Hamath inscriptions. He accompanied the casts by a descriptive memorandum, and also wrote an article in which he was the first to argue that the inscriptions were Hittite remains. The memorandum was published in our *Quarterly Statement*, and the article in the *British Quarterly Review*.

The theory of the Hittite origin of the Hamath and other similar hieroglyphics thus first put forward by Dr. Wright has now been very generally accepted, and the aim of his work is to restore the Hittite Empire to its true position in secular history, and thus to confirm the scattered references to the Hittites in the Bible.

In support of this theory, Dr. Wright has brought forward a large amount of evidence in outline, and he has also placed in evidence the conclusions of many eminent scholars, who in following out different lines of investigation have found themselves confronted by the great Hittite Empire. The whole case is here presented in an intelligible form to the ordinary reader, together with all the material necessary for the prosecution of the subject.

A complete set of the inscriptions, many of them revised in the light of wider experience by Professor Sayce and Mr. Rylands, has been reproduced as perfect as they are ever likely to be. A map is also given on which places associated with the Hittites are marked, and also the sites where the inscriptions have been found.

An important item in the book is an article on the decipherment of the inscriptions written by Professor Sayce. It is the greatest advance yet made in the interpretation of this ancient script, and may yet stand as an important landmark in the history of decipherment.

The book is beautifully got up, and will be welcomed by all who feel an interest in the subject.

In the January number of the *Quarterly Statement* we hope to publish a paper by Sir Charles Warren, giving an account of the Arabs of the Desert, met with by himself in the course of his search after Professor Palmer's

murderers. An important communication may be expected from Mr. Laurence Oliphant. We are also offered during the course of the year papers by Captain Conder, Mr. Boseawen, and others.

The Palestine Pilgrims' Text Society are now issuing their first "Pilgrim." It is the Journey of Antoninus Martyr, with an introduction and notes by Sir Charles Wilson. It has been arranged to have a map showing the route taken by each Pilgrim. The next tractate will be the Journey of Sancta Paula, who will be shortly followed by the Bordeaux Pilgrim, and next, by a translation of the Norman-French Description of the City of Jerusalem.

The income of the Society, from June 26th to September 26th, 1884, inclusive, was £743 8s. 8d. On October 6th the balance in the Banks was £260 18s. 6d.

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or misearriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The following gentlemen have joined the General Committee of the Society:—

Lord Rollo.
Sir Richard Temple.
Sir William Muir.
Professor Hudleston.
Professor Hull.
Mr. George Burns.
Mr. John Robinson, of Westwood
Hall, Leeds.

Mr. A. H. Heywood.
Rev. Professor Milligan, D.D.
Mr. H. S. Perry.
Rev. W. F. Greeny.
Rev. H. G. Tomkins.
Rev. Professor Hort, D.D.
Rev. F. E. Wigram.

MAJOR KITCHENER'S REPORT.

ON the 10th of November, 1883, the party left Suez for the camp at 'Ayûn Mûsa. I was able to compare chronometers at the Eastern Telegraph ship on the way out of the harbour.

The small oasis called the Ayûn Mûsa has been fully described in guide books, and Baedeker gives an enlarged plan of the locality with the heights of the springs in detail.

The place consists of a few springs of limpid but brackish water, small pools with gardens of palms and tamarisks around them, as well as beds of vegetables and culinary herbs.

These gardens are kept by a Frenchman and some Arabs, who have provided summer-houses for the convenience of those who resort thither from Suez to enjoy the fresh desert air.

They form the market gardens from which the vegetable supply of Suez is principally drawn. There exists also a solitary pool upon the top of a neighbouring hill of sand, having one single palm beside it.

While camped there I went over my stores and instruments, and took some astronomical observations to see that all were in proper order for the start.

On the 12th November, camp was moved to Wâdy Sudur ; the route was over an open plain by the sea-shore with a line of cliffs supporting the Tih plateau, about ten miles to the east. Torrents from these cliffs had covered the ground in many places with rocks and boulders. These torrents are extremely short-lived, coming down in force when any rain falls, and drying up almost as quickly. When it ceases, they spread themselves over the plain in many shallow channels, covering a large area with stones and *débris*. One had come down Wâdy Sudur about ten days before, and the traces of wet mud, &c., were still visible over the plain. This wâdy has become famous for the tragedy enacted in August, 1882, when Professor Palmer, Captain Gill, and Lieutenant Charrington were murdered here.

I obtained from an Arab of the Haiwat tribe a story of the murder which I have never seen published in any account of it. I give it merely for what it is worth : Arabs, as everybody knows who has had to do with them, have a remarkable facility for making up a story to meet a supposed occasion.

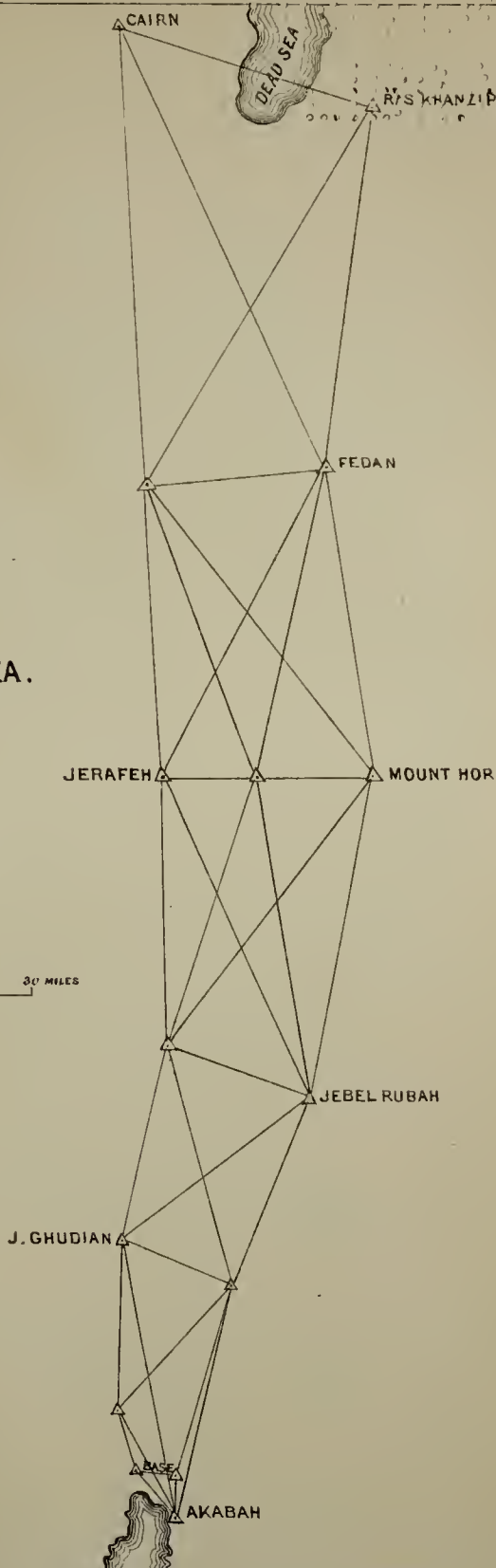
This was the story in the Arab's own words :—

“Arabi Pashi, directed by the Evil One—may he never rest in peace !—sent to his lordship the Governor of Nakhl to tell him that he had utterly destroyed all the Christian ships of war at Alexandria and Suez ; also that he had destroyed their houses in the same places, and that the Governor of Nakhl was to take care if he saw any Christians running about in his country, like rats with no holes, that the Arabs were to finish them at once. On hearing this news, a party of Arabs started to loot 'Ayûn Mûsa and Suez. Coming down Wâdy Sudur they met the great Sheikh Abdullah

DIAGRAM
OF
TRIANGULATION
OF
SURVEY.

AKABAH TO DEAD SEA.

SCALE.
0 5 10 20 30 MILES



Drawn by G. Armstrong

and his party ; they thought they were the Christians spoken of by Arabi Pasha, running away, so they surrounded them in the wâdy. But the Arabs ran away from the English, who defended themselves in the wâdy ; all night they stopped round them, but did not dare to take them till just at dawn, when they made a rush on them from every side and seized them all.

“The Arab Sheikh, who had come with the party, ran away with the money. The Arabs did not know Sheikh Abdullah, and did not believe his statement, and when he offered money, his own Sheikh would not give it, so they believed that the party were running away from Suez, and they finished them there. Afterwards the great Colonel came and caught them, and they were finished at Zag ez Zig. May their graves be defiled !”

Such is the story I heard, and there seems to me to be some amount of truth in it.

Colonel Sir Charles Warren's energetic action in the capture and bringing to justice of the perpetrators of the crime, has created a deep impression, and I consider that the whole peninsula is for foreign travellers now as safe as, if not safer than, it was previously. While on this subject I may mention that I found Professor Palmer's death everywhere regretted deeply by the people, and his memory still warm in the hearts of his Arab friends in the country. Many of them came unsolicited to ask me if I had known him, and to express their sorrow at his loss.

From the length and breadth of Wâdy Sudur I should imagine it must drain a considerable area on the Tîh plateau. The existing maps appeared to me to be wrong after Sinn el Bisher, or Jebel Bisher, as the true scarp appears to recede considerably. I was unable, however, to prove these points, but if a map were made of this part it would probably show considerable variation of the existing plans.

The tract after Wâdy Sudur passes over more rolling country to Wâdy Ghurundel, where we camped for the second night ; the wâdy flows between banks, and is of considerable importance, and drains an extensive country broken up by high hills ; on the edge of the Tîh scarp there are springs and some trees in the valley.

Wâdy Ghurundel forms the boundary of the Ordnance Survey, so that from this point to Jebel Mûsa the map was complete. I was able to sketch in some features on the border of the finished Survey while passing.

Our route led through Wâdy Humrah, Wâdy Nasb, Wâdy Kamileh, from which Armstrong and I visited the temple at el Sarâbît el Khâdim.

The sandstone columns and tablets are in many cases in an excellent state of preservation, and the hieroglyphics were in many cases almost as sharp and perfect as when first cut ; others were very much weathered, some tablets 7 feet 6 inches high, by 2 feet wide, and 1 foot 6 inches thick, and rounded at the top like the Moabite Stone, appeared to me to deserve a better fate than being left to perish from the effects of the weather and the vandalism of the Arabs. Excavations here would, I think, reveal many interesting points connected with the Egyptian occupation of this country at the time of the Exodus. I noticed that the artist had been

inspired by his surroundings ; engraving the Ibex in different positions to form ornamental patterns round the hieroglyphic inscriptions. There were several stations on the surrounding hills where tablets stood, similar to the one described ; but these have been mostly thrown down and broken up.

[The following description of Sarâbît el Khâdim is given by the late Professor Palmer, in his book, "The Desert of the Exodus."

"Although only 700 feet in height, the ascent of Sarâbît el Khâdim is by no means easy.

"A scramble over a rough slide of loose sandstone at the upper end of the valley, a treacherous sloping ledge of rock overhanging an awkward precipice, and a steep ravine which brings into play all one's gymnastic capabilities, leads to an extensive plateau broken up by many deep ravines and rising knolls. On one of the highest of these last is a heap of ruins—hewn sandstone walls, with broken columns, and numerous stelæ, in shape like ordinary English gravestones, standing or scattered at irregular intervals about the place, the whole being surrounded by the *débris* of an outer wall.

"The building consists of two temples, apparently of different dates—one constructed entirely of hewn stones, the other formed by two chambers excavated in the rock at the easternmost end, and having a walled continuation in front. In the largest of these chambers the walls show signs of having been once completely covered with hieroglyphics, though a great portion have now scaled off ; at the upper end is a small niche, probably the altar, beside which is carved a figure in bas-relief. Another niche is seen at the right-hand corner, and in the centre of the chamber is a pillar, cut in the solid rock and covered with hieroglyphics. Some of the hieroglyphics in this cave still bear traces of the paint with which they were formerly ornamented—emerald green inside the characters, with a red and black band above and below.

"The cornice of the wall which forms the continuation of the temple is ornamented with a pretty pattern, and fragments of Egyptian coping lie around the entrance.

"The stelæ above mentioned, as well as such of the walls of the building as are still left standing, are also covered with hieroglyphics, and amongst them may be remarked the *cartouches* of many of the earliest Egyptian kings.

"The purpose of these monuments was for a long time enveloped in mystery, but the researches of Professor Lepsius and other learned Egyptologists have shown that they were connected with the working of copper mines in the neighbourhood, and that the temple was probably that in which the miners and their guards worshipped the national gods of Egypt.

"The mines themselves were first rediscovered by Mr. Holland, during a previous visit to the peninsula, and were carefully examined by the Expedition on this occasion ; they exist in great numbers in the neighbourhood of the temple, and several of them contain beautifully executed hieroglyphic tablets.

"From the inscriptions and cartouches found there, it is evident that the mines were in full working order at the time of the Exodus.

"There is another means of access to the ruins of Sarâbît el Khâdim, by a ravine rather higher up the main valley, which involves a less toilsome climb; but as it also necessitates a walk along a narrow sloping ledge of rock, with a terrific precipice beneath, I cannot recommend it to the traveller unless he feels confident in the possession of a sure foot and a steady head.

"The name Sarâbît el Khâdim signifies 'the Heights of the Servant,' and the place is said by the Arabs to have been so called from a black statue, representing a 'servant or slave,' which was removed 'by the French' during their occupation of Egypt. Amongst the ruins we noticed a pedestal, which might have served for the base of such a statue; and I have since seen in the British Museum a beautifully executed female foot, carved in black stone, which formed part of the collection of curiosities found by the late Major Macdonald in this very spot.

"It is not unlikely that amidst the antiquities in the Louvre, the remaining portion of the 'Khâdim' from Sarâbît may yet be found.

"The hieroglyphic inscriptions from Maghârah range from Senefru of the third Egyptian dynasty to Thothmes III, of the eighteenth line; those of Sarâbît el Khâdim end with Rameses IV, of the twentieth, after which period the mines and temples were abandoned. No inscriptions have been discovered at Sarâbît of kings who reigned between Thothmes III and the twelfth dynasty, nor any after the twentieth. They occur rarely and after long intervals after Rameses II.

"One of the principal tablets at Sarâbît el Khâdim refers to a certain Har-ur-ra, superintendent of the mines, who arrived there in the month Phamenoth, in the reign of some monarch not mentioned, probably of the twelfth dynasty. The author of the inscription declares that he never once left the mine; he exhorts the chiefs to go there also, and 'if your faces fail,' says he, 'the goddess Athor will give you her arms to aid you in the work. Behold me, how I tarried there after I had left Egypt,—my face sweated, my blood grew hot, I ordered the workmen daily, and said unto them, there is still turquoise in the mine and the vein will be found in time. And it was so; the vein was found at last, and the mine yielded well. When I came to this land, aided by the king's genii, I began to labour strenuously. The troops came and entirely occupied it, so that none escaped therefrom. My face grew not frightened at the work, I toiled cheerfully; I brought abundance—yea, abundance of turquoise, and obtained yet more by search. I did not miss a single vein.'

"Another inscription runs:—'I came to the mines of my lord, I commenced working the Mafka, or turquoise, at the rate of fifteen men daily. Never was like done in the reign of Senefru the justified.' These and the frequent recurrence of tablets representing the various kings triumphing over and slaying their foreign captives, will enable the reader to judge of the nature of the mines and the manner in which they were worked by their Egyptian discoverers."]

On the morning of the 18th I took observations with the theodolite from Zibb el Baheir (a trigonometrical station of the Ordnance Survey), over the district to the north-east through which we were to pass, also into Jebel el Watiyeh, on the edge of the Ordnance map, which was formed into a trigonometrical station by observing with the theodolite from it, subsequently observing from Jebel Mûsa. I was thus able to fix many points in the country we were about to survey from a very extended base of Ordnance survey work.

On the 22nd November we left the surveyed country at El Watiyeh, and I made a detour by 'Ain el Akhdar, which I was able to fix; the spring is of good water, and is perennial, with a few palms and other trees hidden in the corner of the valley. I then made my way across low-lying hills at the foot of outlying scarp, to the Wâdy Zelakâ, where camp was pitched.

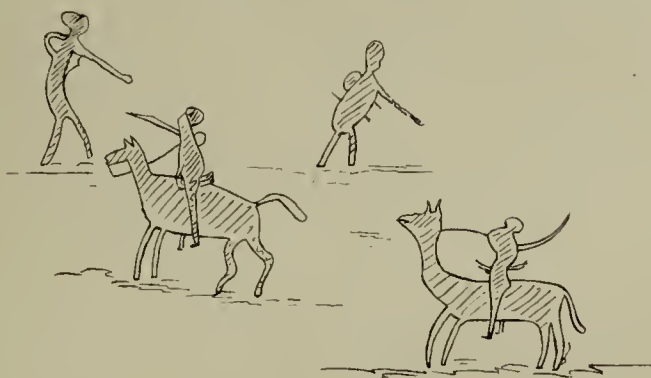
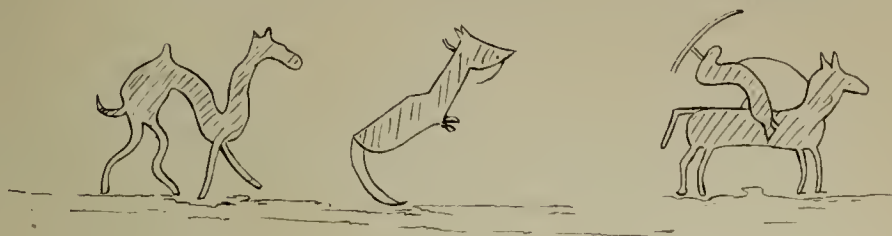
Next day our road led down Wâdy Zelakâ, which bends towards the east, about a mile from the camping ground; and where the bed of the valley opens out Armstrong came across a stone circle almost buried in the sand, the top of the stones only being visible. Striking across to the eastern side of the valley, where a detached piece of rock stands conspicuously out, he found some Arabic inscriptions and a lot of figures, chiefly animals, rather roughly carved out on the face of the rock. The valley, though bounded by steep cliffs, has an open, level, and wide bed, which is one of the principal features of the wâdies in all this region, making the passage of even very mountainous districts easy for animals and even possible for wheeled traffic. No valley of importance joins the wâdy from a continuous line of high hills with cliff, cutting off all communication up that side.

Camp was pitched at the end of this range of hills opposite the broad mouth of Wâdy Biar, where there is an open space with an isolated hill in the centre. Wâdy Abu Tareifeh here comes in from the south-west, joining Wâdy Ughelim from the south, and flows into Wâdy Zelaka; the valley here takes the name of Wâdy Biar, and after a few miles turns to the north at a point where there are some nâwâmîs.

These nâwâmîs are small round circles of stones, some of them built up into a dome shape, having a small entrance on one side; they are a great deal too small for human dwellings, and they are not, as far as one can judge, tombs. They occur in many places in the peninsula, and are generally in groups; there are usually some traces of ruined walls about. The entrance is not in any particular direction; the stones are small, and have not any appearance of having stood from very remote antiquity. I have never seen the question of their origin satisfactorily explained.

While travelling subsequently through the country to the south-east of Gaza on my way to Ismailia, I noticed the Arabs cultivating the ground extensively; they live, of course, entirely in tents, and the barley they grow is sent in to market, but the chopped straw is made up into numbers of small heaps on the ground and covered with earth, forming little domes exactly like the nâwâmîs. There are few stones on the Gaza plain, and

Figures cut on the rock in Wady Zelikhâ



Copied by G. Armstrong.

little earth to spare in the wâdies of the peninsula. I would suggest that they are stone houses of the Arabs when they cultivated these wâdies, probably not very long ago. I saw no traces of cultivation now, but there are many places that would repay the labour well ; and, as far as I can judge, nawâmîs are usually found not far from some spot of this sort.

The walls in the neighbourhood are the traces of the enclosures round the tents. I know that much has been written about these nawâmîs, but having no books of reference with me I submit this opinion with diffidence.

[The late Professor Palmer, along with Mr. Drake, visited these nawâmîs and groups of many others, and gives the following remarks in his book, "The Desert of the Exodus."

Professor Palmer thus describes them :—

"Shortly after passing 'Ain el 'Elyâ (Râs el 'Ain) we came to a group of nawâmîs, those quaint beehive huts of which I have before spoken.

"They stood on the hills to the east of the wâdy, and were more perfectly preserved than any which we had hitherto seen in the peninsula.

"They consisted of two detached houses, on separate hills, and a group of five on the side of a higher eminence. The first two had been used as Arab burial-places ; but of the second group at least three out of the five were apparently untouched.

"Their dimensions average 7 feet high by 8 feet in diameter inside. They were circular, with an oval top, the construction being precisely the same as that of the nawâmîs in Wâdy Hebrân, but the perfect condition in which they have been preserved exhibits in a much more striking degree the neatness and art of their builders. In the centre of each was a cist, and beside that a smaller hole, both roughly lined with stones ; these were covered with slabs of stone, over which earth had accumulated.

"Some human bones which we found in the cist at first led us to the conclusion that they were tombs ; but the small size of the cist, and the evident fact that they had never contained perfect skeletons, proved the idea to be erroneous. In the smaller cist the earth showed signs of having undergone the action of fire, and, in one or two, small pieces of charred bone and wood were found. The doors, which are about 2 feet square, are admirably constructed, with lintel and doorposts. All the stones used in the construction are so carefully selected as almost to give the appearance of being hewn, and those in some of the doors have certainly been worked, if not with any instrument, at least by being rubbed smooth with other stones.

"A flint arrow-head and some small shells were found in one of the nawâmîs. They are evidently dwelling-houses ; but I must leave to those who are better versed than I am in the science of prehistoric man the task of determining to what race they once belonged ; the remains are certainly some of the most interesting which I have met with in the East. The country all around is covered with them, every hillside having some remains of nawâmîs upon it ; but, owing to their exposed position, they

have none of them been preserved in so perfect a state as those just described. Close by the nawâmîs were some stone circles. There would seem to have been a large settlement of these people in the neighbourhood of 'Ain el 'Elyâ.

"The word nâmûs is not known beyond Sinai, the Arabs in other parts of the desert calling them merely gusûr, or castles."]

After three miles the valley turns again abruptly to the east, and at the corner are the important springs of Râs el 'Ain (called 'Ain el 'Elya by Professor Palmer), surrounded by palm-trees ; the water is good and plentiful, forming a small stream running towards a narrow passage (Es Sûk) in the granite hills ; this does not at all prepare the traveller for the grand gorge he has a few steps ahead of him. On entering Es Sûk the cliffs close in on both sides, forming every combination of turn and bend, and running up to about 800 feet with sheer precipitous sides ; every turn increases the height and grandeur of the gorge, while the small stream keeps the place cool and green with many plants and shrubs. Careful traversing had to be adopted through the gorge, which extends four miles.

Camp was pitched beyond the gorge, where another spring occurs called Ain el Akari, watering a small patch of reeds and palms. I had to observe from several high points on either side of the gorge in order to carry on the continuity of my observations.

On the 26th camp was moved. After passing through narrow valleys surrounded by granite hills, the road emerged opposite Jebel 'Aradeh, a high mountain of white limestone, which had to be ascended for observation. In the open portion of the valley there is a well of good water, having a perennial supply, called Bir es Saura : it occurs in a small cave. This well was said to belong to the Terabin tribe of Arabs, but I could not find out that any of them ever came here, and it is certainly detached from their main possessions to the north and west of Nakhl.

The broad valley up which we travelled changes its name frequently as it passes each locality : thus in a few hours it becomes Wâdy 'Aradeh near the Jebel 'Aradeh, Wâdy 'Attiyeh opposite the tomb of the Sheikh of that name, and Wâdy Herteh at Jebel Herteh where we camped.

To the west of Wâdy Herteh the country is much broken up by small hills and valleys. The valley itself is large and open. After bending to the east and passing between some hills it again changes its name and becomes Wâdy el Hessy, which name it retains to its source. There is a small well in Wâdy Hessy, called 'Ain Hamâti, with a scanty supply of water.

The route continues in Wâdy Hessy, which gradually opens out on to an extensive plain ; crossing the plain to the north the watershed is reached : it is formed of low hills with a descent of a few hundred feet to a lower plain on the north. On the west is the range of hills called Turf er Rukm, running out into the plain as far as the Haj road, ending in abrupt cliffs. A broad valley leads away to the north called Wâdy Shiah, joining eventually the Wâdy Jerafeh, and thus falling into Wâdy 'Arabah and the Dead Sea. To the east of this valley are the granite hills of Jebel Humra

jutting up in innumerable sharp peaks. The Derb el Haj runs immediately south of the Jebel Humra, through an open plain which is bounded on the south by a line of cliffs running east from the watershed. We passed along the plain and camped above the Nukb, or descent to the Gulf of 'Akabah.

The Derb el Haj descends about 2,000 feet to the plain of 'Akabah, by a carefully constructed road; the rock had to be considerably excavated in places, and bridges span the watercourses when necessary. A carriage could be driven down the descent without much risk; the road winds down a steep hillside for the first mile, and then descends by a valley through granite hills to the plain below. Before descending I had to make a long detour in order to obtain a good station to observe from, and I was fortunate in finding a point from which I had a splendid view of the Wâdy 'Arabah, which became afterwards one of my trigonometrical stations when passing up the valley.

The Admiralty Survey does not correctly give the form of the head of the bay, which is not so pointed as shown. At the lowest part of the valley the soil is soft and loamy; the remainder of the broad bed is sand and *débris* from the hills.

The castle of 'Akabah is an extensive but ruined building situated close by the sea-shore on the eastern side of the bay, and is surrounded by a few wretched hovels and extensive groves of palm-trees along the shore. It is the abode of an Egyptian Governor, who has a few soldiers at his disposal, and is considered an important station on the Egyptian Haj road. There is practically no trade in the place, as ships never come there. The bay contains sharks and numerous other fish.

'AKABAH TO THE DEAD SEA.

The party had to remain three days at 'Akabah, while arrangements were being made with Sheikh Muhammed Ibn Jad, of the 'Allawin Arab tribe, to take us up the Wâdy 'Arabah.

During this period I was fully occupied measuring a base line on the plain and starting the triangulation of the valley. I was also able to survey some portion of the shore line and hills about 'Akabah, which were not correctly laid down on the Admiralty plan. I measured the base line completely across the valley: its length was 233·86 chains. A point close to the castle of 'Akabah was observed for the vertical angles, and the system employed for extending the triangulation up the valley can best be seen from the attached diagram of triangulation. The Sheikh Muhammed Ibn Jad declared that he could only take us as far as Petra, and that from there we should be obliged to strike across country to Gaza.

On the 3rd December we left 'Akabah, shortly followed by another party, who had been sent out by some company to ascertain the height of the watershed above the sea, by a line of levels from 'Akabah.

About a mile from the north-east corner of the bay Armstrong observed a number of small mounds similar to what are usually found on old sites;

fragments of pottery of various colours are found, and an old wall of masonry is seen cropping out here and there.

The general features of the valley are well known. On the east are the bold granite mountains of Midian, intersected by valleys that have thrown out a mass of *débris* into the main valley, forming a semicircular fan-like ramp up to the mouth of each wâdy ; these are very marked, and when seen from the opposite side of the valley have a very curious effect.

On the west limestone cliffs form a continuous scarp, broken at places and intersected by granite upheavals ; very few important wâdies join the valley on this side, although there are naturally many small ones from the scarp itself. Camp was pitched near Ed Deffieh, some brackish pools of water in the muddy slime that formed the lower portion of the valley ; some rain that had fallen while we were at 'Akabah increased the difficulty of passing this sticky mud.

Next day we passed Wâdy el Mâneï'aieh, flowing from the west, and forming a picturesque recess in the scarp of the western side of the valley, with a granite outbreak closing the entrance. The limestone scarp then continues regularly. I had to visit a high prominent point upon it, to take observations, and from here for the first time I saw and observed into Mount Hor. The ascent of the scarp was a stiff climb of 1,500 feet.

Camp was pitched near the border of the marsh of Et Tâbâ.

Et Tâbâ is a considerable marsh of mud and rushes, extending the whole width of the bed of the valley. There is a passage round it on either side ; the western one leads by 'Ain Ghudian, while the eastern road passes 'Ain Tâbâ, where there are palm-trees, and pools of water and reeds ; to the north of the marsh begin the blown sand dunes with a few scattered palms.

At the north-west extremity of the marsh a spur runs out from the western scarp for three miles, and under it is the 'Ain Ghudian ; there is a pool of water, and several wells giving a plentiful supply of good water.

I found the foundations of a rectangular building, about 20 yards square ; there were also tracks of ancient lines of wells converging from the hills on to the 'Ain, and an Arab graveyard that has been noted before. I saw no traces of a Roman road.

To the north of 'Ain el Ghudian the centre of the valley is choked with sand, leaving a passage on either side.

The hills on the east decrease in height, giving place to limestone and sandstone hills, joining a high range in the background called Jebel Serbal ; the scarp on the western side continues regularly with no wâdies of importance breaking through ; there are several minor valleys. Camp was pitched at the mouth of one of those, called Wâdy Galaita.

Next day I had again to ascend to the top of a prominent point on the western scarp near Wâdy el Beiyaneh, from which a good round of angles were observed ; just below the point there appeared to be a small watershed ; the water channel from the eastern side comes across the valley and flows to the south down the western side, while the valleys from the hill I was on appeared to me to flow north ; it was so late and dark when I got

down from the point I was on, that I was not able to examine this point as closely as I should have liked, but my impression was that there is a small depression in the valley here which does not drain south, unless when a considerable flow of water from the north filled the depression, causing the water to overflow.

The western scarp falls away after the high point near Wâdy Beiyaneh, forming low rolling hills with large openings, through one of which the main road turns westward over the lowest portion of the watershed.

Camp was pitched in the centre of the valley, at the mouth of Wâdy Heyirim, four miles south-east of the lowest point of the watershed.

To the south-east of the camp Wâdy Ghurundul joins the Wâdy Arabah; this valley breaks through a narrow and romantic gorge, and has a good supply of water at 'Ain Ghurundul, situated some distance up the valley.

Next day I made an excursion to the west, surveying the low hills and the lowest portion of the watershed, which is on an open plain dividing Wâdy 'Arabah from Wâdy Jerafeh, flowing north from a south-westerly direction after the opening to the low watershed. A low line of cliffs running north-north-east commences on the western side of Wâdy 'Arabah, separating it completely from the Wâdy Jerafeh; I walked along these hills, called Er Rishy, until I reached the watershed of the main valley at the mouth of Wâdy Huwer, flowing from the east. This watershed is 320 feet higher than the other, and is the commencement of the great valley flowing south up which we had come.

The watershed is curiously formed—just at the mouth of this wâdy, part of the waters of which run north and part south. Those running north are joined by several wâdies from the Mount Hor range, and after passing the end of the low range of hills separating the valley here in an easterly direction, join the big valley of Wâdy Jerafeh or Wâdy el Jeib.

Armstrong found a ruined building in the valley. It measured 102 feet square, with well-cut drafted masonry. The building did not appear to date prior to Saracenic times—very probably one of the old road stations on the highway to 'Akabah.

Camp was pitched in Wâdy Abu Rusheibeh.

The eastern hills here recede, leaving a sort of amphitheatre in front of Jebel Harûn, the Mount Hor of Scripture, which rises magnificently in the centre. There is a mountain of white limestone immediately south of Mount Hor, over which it towers and gains by the contrast of its dark red hue over the white. Looking thus at Mount Hor from the south it appears to rise in several pinnacles, the highest of which is surrounded by a glistening white dome covering the tomb of the patriarch Aaron.

The scenery is exceptionally fine, and I do not consider former writers have exaggerated the grand appearance of Mount Hor; the brilliant colours of the rocks have been remarked by all travellers, but surpassed what I expected to find.

As I had been observing into the dome of Mount Hor for some time I was very anxious to complete my observations by obtaining a round of

angles from there. Next morning therefore an attempt was made to go up without warning the Arabs, as had been done by Palmer and Drake ; but this was frustrated, as I expected, by the Arabs having heard of our coming, and being on the alert. Two parties of our size travelling up Wâdy 'Arabah cannot do so without being remarked and making a sensation. We, however, penetrated up the valley leading to Petra for some distance, and noticed remains of terraces and some buildings on the slope.

We camped at the mouth of the wâdy that evening, and next morning was spent in discussion with the Arabs as to the amount for which they would take us to Mount Hor and Petra. As we could not come to terms, camp was moved in the afternoon towards the Wâdy 'Arabah and pitched in Wâdy Harûn. The Arabs then gave way and acceded to the terms we had stipulated for. Next morning we started before daylight and returned to the ruins we had visited before ; from thence we ascended by a steep zig-zag path to a saddle on the Mount Hor range. Passing along a slightly descending ridge we soon came to the base of a mountain rising from the ridge : this is Mount Hor, being actually from this side a mountain on a mountain, though, from the north the descent is much more precipitous to a far lower level. Unfortunately, the morning was exceptionally hazy, so that it was difficult to distinguish surrounding features.

An old path, similar to that on Jebel Mûsa, with worn steps made out of boulders at difficult parts, led up the mountain to another level space or platform, from which the highest peak rises abruptly. Passing over some ruined arches on an ancient cistern or building, the path leads up steeply by steps cut out of the rock itself to the summit, where there is the usual little round dome on a square building covering the tomb of the patriarch Aaron. Looking inside, one saw the usual carpet covered cenotaph, with some ostrich eggs hanging over it—all in an uncared-for condition. We had to wait some hours on the summit owing to the mist which hung in dense clouds about us until 12 o'clock, when it partially cleared, and I was able to take some observations which were necessary for extending the triangulation to the north. After observing, we made our way rapidly down to Petra, and were able to visit the ruins and the more important tombs. There was no time to make a thorough investigation, but I was able to verify the accuracy of Laborde's plan of the place, and was much struck with the stupendous works in rock-cutting that had been undertaken and executed with the nicest accuracy ; also with the immense number of tombs, the ornamentations being as fresh and clear as when first cut, particularly those at Pharaoh's treasures. The colours of the rocks are wonderfully variegated, and most brilliant ; red to purple and blue are the most predominant colours, and these are set off by a cold grey background of limestone hills.

The ruins and tombs would doubtless well repay a thorough investigation.

It was dark when we got to the pas we had come up at dawn in the morning, and we reached camp about 9 P.M. after a long day.

Arrangements having been made with the Sheikh of our party to take

us to the Dead Sea next morning, we started down the eastern side of Wâdy 'Arabah instead of crossing to the opposite side, as we should have done had our original route to Gaza been maintained.

I went across myself in order to take observations from the other side of the valley, as well as to survey the detail. The valley is here about ten miles broad; the main water channel runs down the western side, and takes the name of Wâdy el Jeib with the main course alongside.

The hills on the western side are low, and much weathered, being of a soft, easily disintegrated limestone. It was late when I found the camp on the eastern side of the valley, and under the circumstances of camp moving continuously along the eastern side of the valley, I was compelled to give up attempting to do the western side, as it was quite beyond the power of myself and camel. I regret therefore that there is here an unsurveyed gap in the work.

Camp was moved next day to 'Ayûn Abu Weridch, or Buweirdeh; it was impossible to find out the exact name, as the Arabs themselves were divided on the subject. I am inclined to think Buweirdeh is the correct name. It is almost impossible to collect the correct nomenclature when travelling so rapidly through a country, with Arabs from a different district, and though I took every means in my power to determine the names definitely, I am not at all confident that in all cases I have obtained the correct names, or nearly as many as might be collected by a more prolonged visit to the neighbourhood. A good deal of blown sand from sand dunes in the valley lead up to the springs which break out in several places from some soft loamy soil in the valley, and form several small streams full of reeds, tamarisk, bushes, and palms, &c.; the water is slightly brackish.

Near the springs Armstrong observed terraces of an old town of considerable extent. There are numerous little mounds of artificial appearance; fragments of coloured pottery abound. The foundation of a building is seen, the stones having a very old and time-worn look, and portions of an aqueduct, level with the ground, are traceable from one of the springs leading to the site.

Next day I was able to obtain good observations from Samrat ez Feidan, from which the Lisan in the Dead Sea was clearly visible.

A considerable perennial stream of water runs down Wâdy Feidan, only losing itself when the valley opens on the plain of Wâdy 'Arabah. Doubtless the plain east of Jebel Feidan was a most fertile garden in former times, and it would take very little to make it so again. I have rarely seen a spot more suitable for every sort of culture, yet it is now a barren waste, and until the Arabs of this country are placed under some control it doubtless must remain so. The wooded mountains to the east about the ancient Dhana form a picturesque background; the ruins of this town, I was informed, were as interesting as those at Petra, with carving in rocks, &c.

Camp was pitched near the mouth of Wâdy Guweibeh, and I was extremely glad to find that a day's halt was to be made in this locality.

Next day, by starting early, I was able to visit the western side of the valley, a distance of twelve-and-a-half miles; I observed with theodolite from a trigonometrical station on the hills beyond Wâdy Jeib, and was able to take up the survey again on that side, thus making the gap unsurveyed as small as possible. Owing to the want of knowledge of the locality by my guide, I was unable to visit 'Ain Aeibeh, which I had much wished to do.

Armstrong explored the country towards the east, and found, six miles north-east of Feidan, the ruins of a small town in a valley, surrounded by bold and precipitous cliffs; the ruined walls are from a foot to 3 feet high, the stones roughly squared, and of no great size; some black heaps resembling slag heaps point out that very probably ancient mines may be found in the neighbourhood. A path leads from Wâdy 'Arabah to this valley, crossing the watershed into Wâdy Ghuweir, where it joins, leading up the valley in a south-easterly direction, a beaten and well-worn track: this was probably the pilgrimage road from Gaza to Mecca. Lower down in the wâdy (Wâdy Ghuweir) are numerous springs of sweet water trickling out of the bed of the wâdy; and in a narrow gorge the rocks are literally covered with Bedouin tribe marks, Arabic inscriptions, &c., the work of pilgrims on their way to Mecca.

Next day was unfortunately extremely hazy, and for the three following days it was impossible to distinguish the western side of the valley at all.

We were not able to proceed a full day's march owing to the intrigues of the Arabs.

Camp was pitched at Ed Debbah close to the descent to the ghôr. We passed a large ruined tank and remains of several buildings at the mouth of the Wâdy Utlah; these remains appeared to me to be of no great antiquity, and to date from after Crusading times. There is little doubt that all the eastern side of the valley was once a most fertile district, the streams of water in each valley being used to irrigate gardens and extensive cultivation, instead of running to waste on the hillsides, as shown by the remains of terraces which still exist almost perfect in many cases.

I heard many stories of the ruins and interesting country that lie to the east, which formed the ancient land of Edom, and I was frequently told that Wâdy Mûsa or Petra is not the most extensive ruin in that district.

The descent to the ghôr was down a sandy slope of 300 feet, and the change of climate was most marked, from the sandy desert to masses of tangled vegetation with streams of water running in all directions, birds fluttering from every tree, the whole country alive with life: nowhere have I seen so great and sudden a contrast.

The principal Sheikh of the Huweitât Bedouins, Sheikh 'Arâr, was camped close to the bottom of the descent, and he came out with some mounted men to meet us.

The country ruled over by Sheikh 'Arâr includes nearly the whole of ancient Edom, from Jebel Serbal to the ghôr where the Bedouins were camped; he is chief of the Bedouins who do not cultivate the ground. There are also several other small tribes of fellahin Arabs who cultivate the ground, and also acknowledge him as their chief; these fellahin are more

difficult to deal with than the Arabs themselves, having no law, and acknowledging no government. The only way to deal with them would be through Sheikh 'Arâr, who is a very respectable Sheikh, and to whom they have to pay tribute. The 'Allawîn Arabs under Sheikh Muhammed Ibn Jad rule the country to the south of Jebel Serbal and to the east of the Wâdy 'Arabah; they are closely allied to the Huweitât Arabs, and originally they say they were all one tribe. Even now the 'Allawîn call themselves sometimes Huweitât; they are under the Egyptian Government, and are employed to protect the Haj road south of 'Akabah. Another branch of the same Arabs is the important tribe of Egyptian Huweitâts under Sheikh Ibrahim Ibn Shedid, whose influence extends over the tribes as far as 'Akabah.

These three Sheikhs rule over a very vast country; they are closely related by marriage, as the Arab Sheikh is very particular that his wife should be of noble blood, *i.e.*, of the family of the Sheikhs. They also recognise that they were originally of one tribe, although they are now completely independent of one another.

The next most important tribe is the Ma'azi Arabs; they rule over the mountains of Kerak, which they are said to have taken from Sheikh 'Arâr's Huweitât tribe. They say they are very numerous in the far East, and the three sections of the Huweitât all complain of the pushing nature of the Ma'azi on their frontiers. There is a large settlement of Ma'azi Arabs in Egypt, extending from Suez southwards along the Red Sea shore as far as Kosseir.

These Arabs everywhere have a bad character for thieving; they are divided up under numerous Sheikhs, and are continually making raids on the Arab tribes round them; they are generally very poor.

The only other two tribes of importance in this region are the Terabîn and the Taiyâhah; the latter are divided into two sections, the Taiyâhah and the Azazimeh. For many years the south country has been in a disturbed state, owing to the war going on between these two tribes; the dispute was about the boundary of the tribe lands near Bîres Seba. Peace has now been obtained by the internal divisions of the Taiyâhah, a portion of whom have gone over to the Terabîn, the remainder having no heart to continue the conflict, although it may break out at any time.

The Taiyâhah have no friends or allies in any of the tribes around them, and have a feud with the great Huweitât family. The Terabîn, on the contrary, are at peace with their other neighbours; they cultivate the ground extensively about Gaza, and are closely allied to the Huweitât of Egypt. They bear a good character, and are a rich tribe.

The Terabîn rule the western portion of the south country, the Taiyâhah having the eastern portion as far as Wâdy 'Arabah.

The Haiwât are a small tribe occupying the country about the Haj road; they are ruled by Sheikh el 'Ayân Mismeh, who has his camp generally about Bîretu Therned. Men of this tribe were the principal actors in the murder of Professor Palmer and his companions; they are a poor tribe, under the influence of Sheikh Shedid of Egypt.

Camp was pitched in the Ghur el Feifeh, near Wâdy Tufihel, and next day we moved on to the Ghôr es Safieh, where the Ghuwarneh were encamped. These are a wretched race of fellahin, who cultivate the Ghôr es Safieh, and are pillaged by the Huweitât from the south, the Ma'azi from the east, and the Taiyâhah from the west. They are the same race as those that occupy the ghôr at Jericho.

They were actually engaged in ploughing up their ground, which is well watered by the streams from Wâdy Safieh. Notwithstanding the constant blackmail they have to pay to different tribes they seemed to be well to do, and I believe make a good deal in trading with the Bedouins in barley, wheat, beans, &c. Owing to various causes we were obliged to stay in the Ghôr es Safieh until the 27th December.

The south end of the Dead Sea is formed of extensive mud flats of a very slimy character. The recent rains had doubtless contributed to the soft state of the mud, but the natives told me it was never hard. It was almost impossible to reach the edge of the water of the Dead Sea through the mud. A line of driftwood had been thrown up a considerable distance inland, forming a shore line almost half-a-mile south of the water's edge.

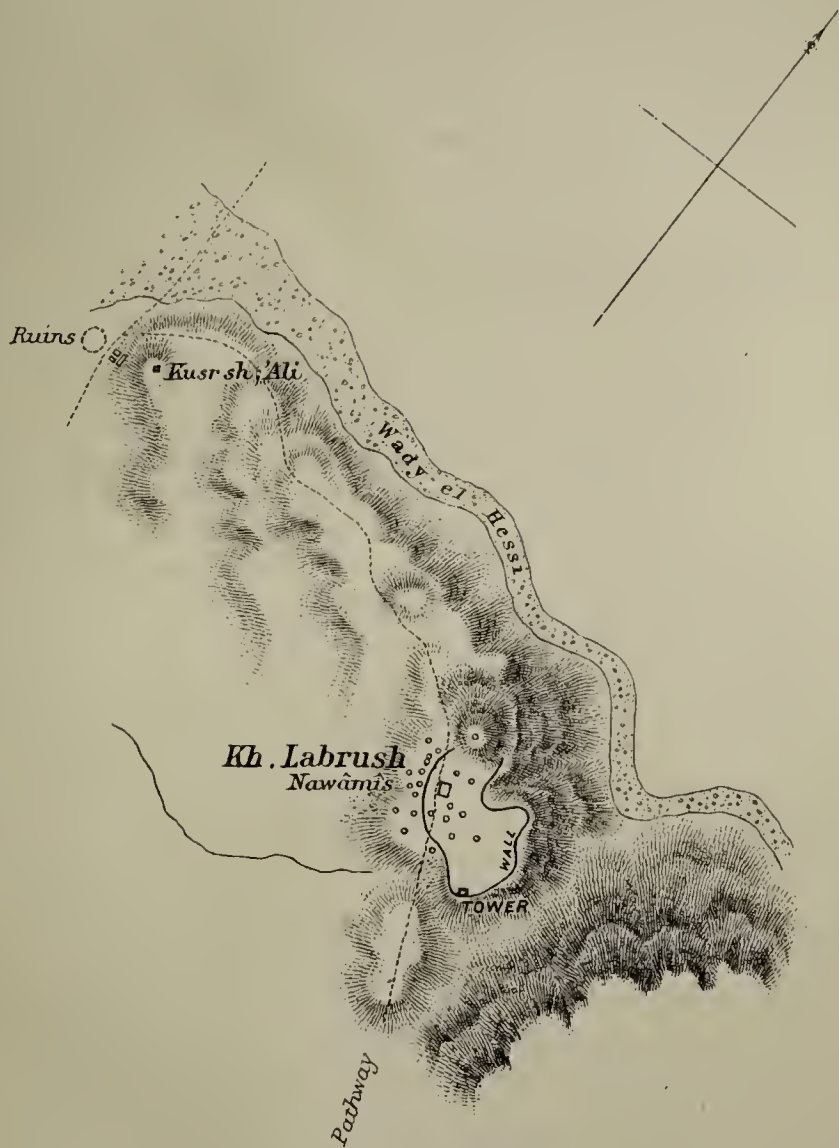
I found it was quite impossible to measure a base line through this slime, and the dense vegetation of the ghôr left no open space available. After several attempts I was obliged to relinquish the idea; this I regretted very much, as I found the portion of the Dead Sea to the south of the Lisan had been very inaccurately delineated on previous maps, and the Lisan itself had to be moved considerably, as will be seen on the plans.

I took several observations into the trigonometrical station on our old survey of Palestine, and was able to connect my triangulation up the Wâdy 'Arabah from 'Akabah in this way with very satisfactory results. The diagram of triangulation and plans will show the observations that were taken, and how the connection was established principally through the observations subsequently taken from a cairn on Râs Zuiweirah.

Overlooking the ghôr on the eastern side, just above the ruins of some modern mills at Kusr Sh. Ali, Mr. H. C. Hart, in his botanical rambles, found some very interesting ancient remains at a place called Khurbet Labrush. These remains consisted of a large number of nawâmîs, some of which were in a wonderfully perfect state of preservation. These nawâmîs are dotted about thickly over the site without any plan, and the openings in them having no especial direction; a few loose stone walls near some of them have the appearance of having been thrown up recently round tents. Enclosing the greater number of these nawâmîs is an ancient wall following the contour of the hill for a quarter of a mile; only the foundations remain, but they were of massive undressed masonry, of apparently remote antiquity. Inside the wall there are the ruins of an oblong building of similar masonry, very probably an ancient temple; unfortunately the remains are so ruined that it is impossible without considerable labour to thoroughly explore or measure this monument: only one corner could be determined, the remainder being covered by heaps of massive stone blocks.

There are several other heaps of ruins and large cairns of stones inside

SKETCH PLAN of KH. LABRUSH & NAWÂMÎS.



Scale
0 100 200 400 600 800 1000 1200 1400 1600 yds.

the enclosure, but these are all detached and do not appear to be the remains of a town. I could see no extensive remains of buildings such as are found in ancient sites in Palestine.

The wall ran nearly north and south, and at the southern end there are the remains of what was probably a tower ; traces of the wall can then be seen following the hillside for a considerable distance, and enclosing the hill. The nawâmis are not all inside the wall, and appear to me to be of more recent construction. An apparently old roadway leads through the ruins, and crossing a saddle of the hills leads up to the high hills on the east.

The remains appear to me to be those of a very ancient site subsequently used by the Arabs as a camping ground. I could find out nothing from the Arabs about these remains, though they are well known.

The view from here over the gorge of Es Safieh to the north is a very fine ; the various and brilliant colours of the rocks are most marked ; cliffs of a bright rose colour line the stream, alternating with yellow, dark red, and purple.

The ruins in the Ghôr es Safieh appear to be all modern ; there is a large reservoir and several ruined mills, all of Arab construction.

A track across the mud flats leads to the base of Jebel Usdum, the mountain of salt, on the western side of the valley. I found that this mountain had to be considerably altered in shape and position to what it has been shown on existing maps. It is almost detached from the surrounding hills, and descends abruptly in cliffs to the Dead Sea shore. It reaches a height of 600 feet above the Dead Sea, and is broken and cracked by many fissures. All round the ghôr there is a border of the same marly hills, more or less washed away, and extending for some distance up the valleys.

On the 27th December we passed round the Jebel Usdum by the sea-shore and followed a road leading up the Wâdy Zuweirah. The road leads up a winding ravine in the bare limestone hills that extend all along the west side of the Dead Sea.

A picturesque Saracenic castle, now in ruins, is perched on an isolated hill in the centre of the valley, defending the pass from an enemy advancing from the east.

An ingenious loophole has been cut in the rocks on the opposite side of the valley in advance of the castle, from which the valley is entirely commanded.

After the castle the road ascends steeply by zigzags to a pass, after which the country is more level, but continues to ascend as far as Râs Zuweirah.

Camp was pitched after dark in Wâdy el 'Abd, where there is a small supply of water. The water supply in these wells is very limited.

Next morning I was able to obtain a valuable round of observations from the cairn on Râs Zuweirah, at the top of the ascent. The cairn itself was apparently a very ancient landmark or tumulus, and is seen prominently from all the country round.

Passing over some rolling hills through very open country, with a few ruins distinctly marked by the verdure around them, we encamped on the edge of our former surveyed work at Tell el Milh. The following day we marched to Bîr es Seba, and from there to Tell abu Hareirah, all in the published Map of Palestine.

At the latter place I left the party, and with four Arabs of the Egyptian tribe struck across country by a southern road to Ismailia. The rest of the party proceeded to Gaza.

I was greatly assisted in my work by Mr. George Armstrong, late Serjeant-Major R.E. who has had a vast amount of experience in surveying in the East for the Palestine Exploration Fund, and without his aid I should not have been able to arrive at nearly as satisfactory results on this expedition.

The means of surveying adopted was, 1st : In the Mount Sinai work taking a broad base over twenty miles long on Sir Charles Wilson's surveyed country ; positions were fixed by observation, and a chain of observations were kept through to 'Akabah.

2nd. At 'Akabah a base line was measured, and the former work connected with it. A triangulation was then extended up the Wâdy 'Arabah until, at Râs Zuweirah and Kusr Sh. Ali, it joins on to the old triangulation of Palestine proper.

The attached diagram of triangulation will show the number of points observed.

The plans will show full details of the work done. Heights were obtained up the Wâdy 'Arabah by vertical angles.

The total area triangulated and surveyed in the above manner in the two months employed is roughly 3,000 square miles.

Owing to the rapid passage of the party through the country, and the impossibility of getting guides with local knowledge, the names are not, in my opinion, in every case reliable, although I took every opportunity to check them by local information as much as possible. Many more names could also be collected by a more lengthy stay in the country.

I had the names written down in Arabic, so that the spelling is as correct as possible ; but I have reason to believe the localities were not always correctly shown.

TELL ABU HAREIRAH TO ISMAILIA.

On the 31st December I left Tell abu Hareirah with four Arabs of the Huweitât tribe of Egypt that had been sent to us at the Dead Sea with a letter from Sir E. Baring describing the disasters in the Soudan.

The rest of the party went on to Gaza to undergo quarantine.

As the El Arish road was well known, I determined to march direct on Ismailia, thus striking out a new line, and passing through much more interesting country. One of my party, Abu Suweilim, had been employed by Sir C. Warren in hunting the murderers of Professor Palmer, and was one of the most energetic useful Arabs I have ever met : he had

been the road we were about to take fifteen years before ; the others did not know the road at all, and were of the usual Bedouin type, lazy and greedy.

Passing over a plain of cultivated ground, with numerous Arab tents, the inhabitants of which were busily employed in ploughing, and which had been already surveyed about one o'clock, I came to Wâdy Fara ; this is a large and deeply cut wâdy, and contained a good deal of water. Just below the crossing there is a prominent mound called Tell el Fara, and before descending there are some traces of ruins and foundations of buildings called Kh. el Fara, but nothing of importance was left. An hour beyond the valley is a well-known tent called El Khudra, where for the last ten years a merchant from Gaza has traded with the Arab tribes, and doubtless does a good business, as many of the Arabs dare not show themselves in Gaza. The trader was a Bulgarian, and was so delighted at hearing his native tongue spoken that he would take no pay for the provisions of coffee, dates, and a saddle-bag I bought ; he said he often had dangerous times with the Arabs, but that he bought a protection from the most powerful of the neighbourhood, and always obtained restitution of anything stolen.

We pushed on over open country until dark, when we made our camp fire on an open plain with a number of Bedouin's fires blazing round us. I was passed as Abdullah Bey, an Egyptian official journeying back to Egypt after having been to Jerusalem, and although it was only begun for that little while, I thus revived the name borne by a much more distinguished traveller, the great Sheikh Abdullah, and although it was only stated to stop the curiosity of the Arabs we met, I soon found I was called nothing else.

At dawn we were up, and after feeding the camels and getting some coffee brewed we were ready to start at 8.30. During the whole journey I never could manage to get started much before this hour, as the Bedouins require some time to get the night chills out of their bones ; the nights were certainly very cold and damp. Our track after crossing a plain struck a road coming from the north-west, and after rising a slight hill the country gradually became more and more sandy, all signs of cultivation gradually dying out, and the continual climbing up and down the sand dunes being most fatiguing and monotonous. At 12 o'clock the track changed direction to south-west, down an open valley amongst sand dunes called San'a el Men'aî, and we camped in a little valley surrounded by the sand. Next morning the route was continued over sand dunes, and we came early to a considerable pool of rain-water called El Khubara ; it is formed by the soil of Wâdy Abyad being turned by the Arabs into an old valley bed which is now closed, and they informed me it was kept full all the winter by rain-water coming down the wâdy. A few minutes further on is the first big valley since Wâdy Fara ; it is called Wâdy el Abyad, Wâdy Khubara, and Wâdy ez Zayik, and runs with a broad bed through the sandhills to the north-west ; there are many tamarisks and bushes along its course. Here we stopped for an hour to bake bread, and

then leaving the valley crossed over more sandhills which seemed interminable. At last the country opened out, and after passing over some very broken ground we arrived at Wâdy el 'Arish.

The valley runs in a deeply-cut bed with mud banks ; it is here about 80 yards wide. There was a pool of rain-water in a bend of the valley, which my guides informed me covered a well called Bîr el Mujdebbah, and if my guides' account was true, that water could be got here all the year round ; this is the only perennial source on this road as far as Ismailia.

After Wâdy el 'Arish the country opens out into a broad plain with an isolated small range of hills called Jebel el Bena in the centre. To the north there is a sandy covered range called Riza Anizeh, and to the south the high hills of Jebel Helah ; a track leading away to the south-west between Jebel Bena and Jebel Helah through an open plain, led, I was told, to Suez. Here camp was pitched.

Next day we passed close under Jebel Bena on the north side over a stony plain called Ragadda ; the hills were formed of nummulitic limestone, and appeared perfectly dry and bare ; the wide open plains were very flat and bare of vegetation, with the exception of a small amount of the usual desert shrub. It was a great relief to get clear of the sand dunes, which ended close to Wâdy el 'Arish.

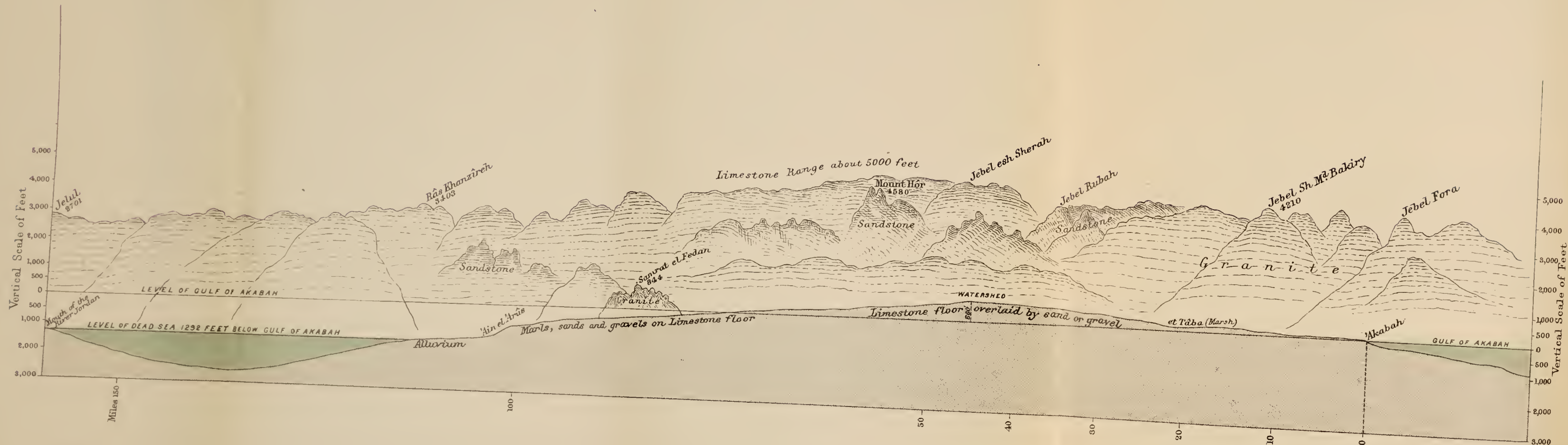
On reaching the end of Jebel Bena the high range of Jebel Yelek appeared to the south-west, and the long range of Jebel Mugharah flanked the valley on the north ; an open plain up which we travelled led between these two, and our track ran close under the Jebel Mugharah. I was told there was a cave in the interior of these mountains which contained a perennial supply of water. The hills rose abruptly from the plain, and appeared to be of the same formation as the nummulitic range of Jebel Bena. In some places the strata were much bent and contorted. At nightfall we reached a ruined well called Bîr el Hemmeh, which contained a small quantity of stagnant water which had a very unpleasant smell.

Next morning we passed a small ridge formed by a volcanic outbreak of trap rock, and shortly after the sand began to appear again. In a few hours we reached the watershed of the valley ; the sand had increased to high ridges and hills, through or over which we had to find our way. The watershed was flat, another open valley leading away to the west with Jebel Felleh on the south, and a continuation of the Jebel Mugharah range on the north. We camped on the sand near a prominent top called Jebel el Urf, which forms a landmark on this road.

Next morning we crossed the low ridge under Jebel el Urf, and passing down a sandy valley at noon we came to a flat of mud which formed the end of the valley, a barrier of sand having been thrown up and thus stopping up the valley completely. Crossing this ridge an immense extent of sandhills appeared as far as the eye could reach. I do not think I have ever seen so desolate and dreary a country : nothing but ridge after ridge of sand dunes for an immense distance. The wind blew

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SECTION OF WADY ARABAH, SHEWING THE DEPRESSION OF THE DEAD SEA BELOW THE GULF OF AKABAH, AND OUTLINE OF MOUNTAINS LOOKING EAST.



Drawn by
Geo. Armstrong

F. Waller

a strong gale from the west, sending the sand up into our faces so sharply that the camels would at times hardly face it. This wind lasted, unfortunately, until we reached Ismailia, and was very trying to the whole party.

We camped under a sandhill and had a very cold and windy night. Next morning it was found we had no water. The Arabs are always most improvident about water, and require continual watching; during the night they had used up the last drop, and in the morning said they could not go on without a fresh supply, as there was no chance of water before Ismailia, and they did not know how long it would take to get in.

They said they could find rain-water in Jebel Felleh. I, however, insisted on going on, and with some difficulty got the camels under way. Two of my Arabs had been lagging behind for some time, so one of the Arabs and myself went back and drove up the camels; the two Arabs were sulky and deserted; however, we got the camels all right. Pushing on through a blinding storm of sand over hill and valley, with only the compass to guide us, at 4 P.M. I saw Lake Tumah, and skirting the shore reached the ferry over the canal at dusk. I had some little difficulty in getting the party across the canal, and was not sorry when I reached comfortable quarters in Ismailia.

H. H. KITCHENER.

THE SECTION OF THE WÂDY 'ARABAH.

THE Wâdy 'Arabah extends from the head of the Gulf of 'Akabah to the south end of the Dead Sea, and is 112 miles long.

The width of the valley at the foot of the hills, from 'Akabah to near the lowest point of the watershed, averages about six miles.

A series of low ridges, called Er Risheh, of about 150 feet above the plain, run obliquely across the valley at this point, forming a length of ten miles. Opposite Mount Hor the valley widens out to thirteen miles, and gradually narrows in to six miles at the south end of the Dead Sea—the same width as that at 'Akabah. The sectional line is drawn from the Gulf at 'Akabah, through Wâdy 'Arabah, representing the lowest depression, to the southern end of the Dead Sea, and continued to the northern end, where the river Jordan enters, showing the depression of the Dead Sea, and that part of Wâdy 'Arabah below the sea level of the Gulf of 'Akabah.

The lowest point of the watershed (660 feet above Gulf of 'Akabah) is computed to be forty-five miles from 'Akabah, and twenty-nine miles farther north the sea level point is reached.

The sketch of the outline of the hills on the eastern side of the valley is given relative to the calculated heights as noted.

Those on the western side (not shown on section) range about 1,900 feet above sea level.

GEO. ARMSTRONG.

ANTIQUITIES OF PALESTINE IN LONDON.

(Reproduced from the "Times.")

LONDON and Paris are the only two cities possessing special collections of Palestine antiquities. I do not include in this category rare specimens which may exist sporadically in other European museums or in private hands. These London and Paris collections are, it is true, upon the whole, very trifling, particularly if compared with those, so rich, so varied, which give beside them so imposing an idea of the great civilisation of Egypt, Assyria, Greece, and Italy. It is strange, indeed, that Palestine, which has so long absorbed the attention of so great a number of *savants*, and has the privilege of always exciting the public interest, should not be better represented from an archæological point of view. It is, above all, of this little corner of land, holding so large a place in scientific and religious preoccupations, that one would be anxious to possess monuments as witnessess of its history. The time has, I think, arrived for taking serious notice of it, and seeing if it would not be advisable to inquire into the cause of this inferiority and the means of doing away with it. It never struck me more forcibly than when, some months ago, I was engaged in making a methodical inventory of the monuments of Palestine belonging to the Palestine Exploration Fund and the British Museum. I intend to sum up the result of my researches upon this subject, and, after having submitted to the public a cursory but exact view of the situation, point out such a combination as would permit of its advantageous modification.

I will begin by giving some information upon the antiquities of Palestine existing in Paris. I will then speak more fully upon those which exist in London, because, never having been made the object of a general study, they are less known as a whole.

I.

The Museum of the Louvre has possessed, since 1870, a room for Judaic antiquities, or, to speak more correctly, for antiquities from Palestine. In 1879 the catalogue did not exceed 83 numbers, several of which are only casts. The most precious pieces are the Moabite Stone, which I was enabled to complete, thanks to the little fragments collected by Sir Charles Warren, and kindly presented by the Committee of the Palestine Exploration Fund; a Moabite bas-relief from Chihau, representing a personage with a helmet, of Egyptian style, brandishing a lance, perhaps a King of Moab; a votive white marble foot from Jerusalem, with Greek dedication of a thankful heathen woman named Pompeia Lucilia healed at the Pool of Bethesda; a few sarcophagi, or fragments of sarcophagi, from the tombs of the Kings near Jerusalem, one of which bears an Aramean and Hebrew inscription in the name of Queen Saddan (probably the famous Jewish proselyte Helena, Queen of Adiabene); three

or four Jewish ossuaries in soft limestone ; a marble bas-relief from Ascalon, representing three female divinities ; a *figurine* in solid gold of Egyptian style, found by me at Gaza ; a bas-relief from Gadara, representing the candlestick of the Temple, with the seven branches ; a seal, with Hebrew Archaic characters in the name of Shebanyahu, son of Uziah.

This little series, which is, properly speaking, a mere embryo collection, will be more than doubled by the antiquities brought by me in 1882 from my last mission in Palestine. They are not yet exhibited, for want of space ; I have just published the illustrated catalogue¹ of them, amounting to 111 numbers. I would point out, among other things, six bronze statuettes, two fragments of marble statuettes, among which a colossal head of a woman, of very fine style, from Sebastiyeh ; four bas-reliefs, one of which, found at Arsuf (Appollonias), proves that, notwithstanding all that has been said, the ancients were acquainted with the use of horse-shoes ; 57 vases and terra-cotta lamps ; a Jewish ossuary, with sculpture in relief (very rare) ; a pair of capitals, one of which bears the legend ΕΙΣ ΘΕΟΣ ("only one God") ; a large massive bronze dish richly ornamented with Jewish symbols ; a Phœnician inscription, discovered by my mother on Mount Carmel ; 21 Greek inscriptions ; eight Roman, two of the Crusades, &c.

II.

The list of antique objects from Palestine preserved in the British Museum consists, as far as I could find, of only 57 numbers. These objects are at present dispersed here and there in different parts of the Museum, and have no special numbering, beyond their registered mark of entry. While reproducing, when possible, these registered marks, I have, for greater convenience, given to this scattered collection of objects a series of numbers, classing them in natural groups.

With the exception of a few pieces of the highest order, the objects for the most part are not of great interest. I would mention, in the first place, the two Hebrew inscriptions discovered by me at Selwan, near Jerusalem, in 1870, the possession of which I assured to the British Museum. These two texts, in archaic characters of Phœnician form, belong to the epoch of the Kings of Judah, and are to be placed parallel with the famous inscription of the aqueduct of Siloam. Thanks to them, the British Museum is, as yet, the only museum in Europe possessing, in the original, specimens of Israelitish epigraphy anterior to the Exile. Afterwards come five intaglios, or gems, with Hebrew archaic inscriptions, having certainly belonged to ancient Israelites, as indicated by the characteristic form of the names of their possessors, adorers of Jehovah—Asyu, Yokim, Hananyah, Gadyah, Sephanyahu, Nehemyahu, Mikayahu, &c. Apart

¹ "Mission en Palestine et en Phénicie, entreprise en 1881." V^e. rapport. Paris : Maisonneuve et Cie., 25, Quai Voltaire. (With 80 engravings and 12 heliographie plates.)

from these monuments, the current epigraphy of Palestine is only represented in the British Museum by a Samaritan inscription from Nablus (Sichem), of rather late epoch, a Greek inscription of Sebastiyeh (dedication of M. Licinius Alexander, son of Quartinus), and a kind of stone seal from the same place, bearing a brief Greek-Byzantine epigraph. I would also mention, though belonging indirectly to Palestine, a disk of green enamelled earthenware of Egyptian manufacture, coming from Gaza or Ascalon, and bearing in relief a cartouche of the King Rameses II.

The British Museum is poor in Palestinian terra-cotta lamps. It only possesses nine, five of which have been acquired from the Palestine Exploration Fund. Two of these bear the ordinary Greek Christian legends. Among the generic types or heads under which I have been led to class all the Palestinian lamps, and which are not represented in the British Museum, I would in particular point out the Jewish type, of which I shall speak presently.

The British Museum possesses about fifteen terra-cotta vases of divers shapes, coming, for the most part, from Bethlehem and from Beit-Sahur; and some fragments of painted pottery picked up in the country of Moab.

In the way of sculpture there is a terra-cotta *figurine*, found, it is said, at Bethlehem (I have some doubts on this point); this *figurine* recalls the terra-cotta *figurines* of Babylon, and represents a nude woman supporting with her two hands her voluminous bosom; a mutilated head in white limestone, brought from Kadesh by the regretted late Dean Stanley (these two objects are very curious); a lion's muzzle in marble, half broken, from Jericho.

In the way of bronzes, there are four belt plates, with figures in bas-relief of Roman style, found in a tomb on the Mount of Olives, and given by Pococke; a small statuette of a man, from Jerusalem, draped in the Roman toga, leaning on a stick, and holding a roll, destined to be fixed on a staff.

Among the objects in glass are to be remarked two tesserae, one in blue glass (brought by me from Ascalon), the other in white opaque glass from Gaza, both representing in relief the double face of the Egyptian goddess Hathor.

One of the most interesting objects in this little Palestinian series would be, if the origin assigned to it were well established, a large shell (*tridæna elongata*), with engravings both in and outside, precisely similar to the engraved shells found in Assyria, and of which the British Museum possesses several specimens. Amongst other symbols there is represented the head of a god with large outspread wings, and a figuration of the sun in circles of lotus. This shell, acquired from the Rev. Dr. Barclay, was discovered in 1865 in a tomb in the vicinity of Bethlehem, not far from the so-called sepulchre of Rachel.

III.

The Palestine Exploration Fund possesses a comparatively large number of antiquities, coming, for the greater part, from Sir Charles

Warren's and from my own excavations and researches in 1873-4. These objects are deposited in the office of the Fund or exhibited in the South Kensington Museum. However, a number of them, found by me and belonging to the Fund, have remained at Jerusalem, whence it would be desirable to have them sent for.

It was to be regretted that these articles now in London had not yet been made the subject of a regular catalogue. A short time ago I undertook this work—rather difficult work indeed, which lasted over a month. Too frequently exact indications respecting the origin were wanting, and when the objects bore tickets or marks, these were either dubious or illegible. The difficulty was further increased by the unequal and casual allotment between the office of the Fund and the South Kensington Museum, which sensibly complicated the comparison, the rational classification, and the material numbering. I am glad to take this opportunity of thanking Mr. Walter Besant, Secretary of the Fund, Sir Philip Cunliffe Owen, and Mr. Sandham, of the South Kensington Museum, for the very obliging manner in which they facilitated my task.

Now each article is marked with a number, permitting it in future to be easily found again, and quoted with precision; it is moreover represented in my catalogue by a descriptive notice, in which I have made all useful observations concerning its origin, form, use, and, if necessary, its interpretation. This first work effected, I have proceeded to a methodical classification by analogical series, thus creating so many sections where antiquities subsequently obtained will take their place.

I intend shortly to publish this catalogue, which may be of real service, particularly if accompanied by drawings representing the most important objects and types of each series. In the meantime, a brief account of this detailed inventory will perhaps be read with interest.

The antiquities actually existing at the office of the Fund, as well as at South Kensington, number 666. I have excluded from them, with certain rare exceptions, divers objects evidently Arab or modern. Neither have I included, for want of sufficient information, those remaining at Jerusalem or elsewhere.

These antiquities may be classed as follows, according to their material :—

Articles in stone, 150 numbers; in terra-cotta, 444; in glass, 20; cement and plaster, 11; articles in bronze, 19; in iron, 8; in lead, 3; in ivory and bone, 6; in wood, 1. There must be added to this total 4 false monuments (three Moabite potteries, and the pretended sarcophagus of Samson in lead).

Among the objects in stone, there are nine bas-reliefs or statues more or less fragmentary. The most interesting of all is certainly the winged cherub, with human head, of Assyrian style, engraved on the rock discovered by me in 1871 and cut out in the vast quarries called Royal Caves, extending under a part of Jerusalem. I would further point out a pretty head of a woman in marble (*Artemis*) brought by me from Ascalon in 1874; a torso of a faun in marble (*statuette*); a bearded

head of Jupiter ; the right eye of a statue life-size (found at Ophel, 27 feet deep, by Sir Charles Warren). Among the inscriptions on stone, six in number, may be noticed an original fragment of the bilingual Greek and Hebrew inscription of Gezer, indicating the legal boundary of the city, and four marble tituli from the necropolis of Joppa, with Greco-Jewish epitaphs.

I shall rapidly review the other groups, occasionally giving a few summary particulars concerning the principal objects :—

Eleven ossuaries, or fragments of ossuaries, of which nine with Hebraic or Greco-Hebraic inscriptions.

Twenty stones vases, of which four (small libation vases and tables) are quite out of the common, from their form and ornamentation.

Thirty fragments of architecture of various epochs.

One fragment of mosaic paving.

Thirty hand grindstones or polishers in silex, hard limestone, sandstone, and basalt.

Twenty-five cones or cylinders in soft limestone or chalk, whose use is yet to be determined, and which served, perhaps, as polishers.

Nineteen bullets and balls of silex, basalt, and limestone (projectiles?).

Eight weights in hard limestone in the shape of thick discs, with turned down bevelled edges. One of them bears on both sides characters appearing to be Semitic. The real nature of these objects is placed beyond doubt by an as yet unpublished specimen in my collection, found at Jerusalem, bearing, in Greek characters of the first century of our era, "The year 5 of King Athamas." This king Athamas, who reigned at least during five years, is perfectly unknown in history. But the presence of this formula, identical with the monetary legends, certainly shows that we have to do with a weight, for the close affinity existing between numismatics and metrology is well known.

Eleven divers objects in stone, some of which deserve special notice. In the first place, the valuable seal discovered by Sir Charles Warren in his excavations, and bearing in Hebrew archaic characters the name of Haggai, synonymous of the prophet, son of Shebanyahu. Next, a small block of basalt, roughly squared, pierced on one side with a conical hole, narrow and deep, perfectly polished in the interior. I think I have succeeded in determining the use, until now unknown, of this singular object, discovered by Sir Charles Warren in his excavations at Ophel. It is simply the lower pivot upon which a door revolved. Considering the smallness of the hole, the revolving axle of this antique door must have been in metal (bronze or iron).

A fragment of moulded basalt coming from the same excavations also much attracted my attention. I am inclined to recognise in it a fragment of the edge of a stela, similar in form to the Moabite Stone. If my idea be correct, we have, perhaps, here the remains of a monument of the Kings of Judah, of inestimable importance, more significant parts of which may not impossibly be discovered some day.

Four fragments of terra-cotta figures from Jerusalem ; a pretty head of

a statuette (woman or child), and three fragments of a rude and primitive art, from my excavations in Jerusalem (torso of a woman, head and body of a quadruped).

The terra-cotta lamps form, with the vases, the larger if not the more important sections of the collection of the Palestine Exploration Fund. They consist of no less than 197 numbers. I have, after attentive and careful study, succeeded in dividing them into eleven principal groups, excluding the less frequent varieties. Each of these groups appertains to a special type.

I cannot enter here into the particulars of this classification. I shall confine myself to dwelling upon the first of these groups, consisting of twelve lamps which I consider as properly Jewish. What led me to attribute this origin to them is the nature of their ornamentation, their style, their fabrication, their general shape. Upon several of them I find the characteristic Jewish symbols, the *ethrogs*, the two-handled vase, the grapes, &c. They all present this peculiarity of having under the basin a prominent circular pad, with a small button in the centre. The burner is of quite special rounded form; the handle is short, pyramidal; the clay is fine, the workmanship elegant. Such are the diagnostic features by which I propose to recognise henceforth lamps of Jewish workmanship.

The group of lamps with Christian Greek inscriptions number 11. They are of the formulæ already known, "The light of Christ shines for all," or "beautiful lamps," and others sometimes very carelessly traced and almost illegible.

I have formed a group of nine lamps of antique shape, which I believe to be of Arab manufacture. This may cause astonishment at first. But the fact is confirmed by the presence upon two of these lamps of incontestably Arab letters traced in relief around the central hole.

The terra-cotta vases number 219. I have also distributed them among several classes according to their similarity of form. In the first rank I would point out the six handles of amphoræ, with stamps in Hebrew archaic characters, found in the excavations of Ophel by Sir Charles Warren, and the large vase covered with bas-reliefs, found in my excavations at Bezetha.

I shall relate, incidentally, a little discovery made by me in the course of this part of my catalogue. Sir Charles Warren brought from Jericho a gigantic neck of an amphora (the neck alone measures 41 centimètres) which was buried in one of the *tells* of the plain. Upon the edge is a Latin stamp, already published, giving the potter's name. But in attentively scrutinising the fragment I have further ascertained the existence of two lines of Greek characters, traced in ink with the *galam*. They are extremely faint and indistinct, and one may understand that they have escaped notice until now. I read in one of these lines, ΟΥΙΝΟΣ ΧΙΟΥ, "Wine of Chios." The hybrid Greco-Latin form ΟΥΙΝΟΣ (*vinum* and οἶνος) is most remarkable. At all events, this epigraph gives us exact information as to the destination and age of this enormous recipient.

Among other objects in terra-cotta, numbering thirty-four, two deserve

a special mention. They consist of two fragments of tiles or bricks, marked with the stamp of the 10th Legion *fretensis*, left by Titus in garrison at Jerusalem after the siege in which it had taken an active part.

The objects in bronze comprise a little Egyptian *uræus*, an ape, a ram lying down, a bust of a woman with a suspension ring on the head, mirrors, a spiral spatula, two clasps, a ring, a part of a helmet, an *umbo* of a shield, a triangular spatula, a candelabrum of the Crusades, &c.

Iron is represented by a few nails and fragments of a doubtful age ; lead, by a small *figurine* of Venus Anadyomene found by me at Jerusalem, and two seals, one of which, ornamented with a personage in an *ædicula*, appears to have been used to close up the orifice of a narrow-necked vase ; ivory, by an elegant female figure holding a crown, brought by me from Ascalon, a small plaque, marked with concentric annulets, a die and various remains, among which are some cylindrical fragments, belonging possibly to an antique flute ; wood, by a few morsels of carved cedar, burnt and decayed, found in the ruin of an ancient church near Jericho.

IV.

Such is the summary of the antiquities of Palestine existing in London.

One may see that, even adding to them those of the Museum of the Louvre, the whole makes a very modest group, since it does not amount to 1,000.

Among the number are pieces which are really of the highest order, and suffice to show that well directed researches might produce most important results. It is, at the least, a guarantee of success for the future—a testimony proving that the Holy Land still contains, and can deliver up to seekers, monuments capable of rewarding them for their trouble, and of shedding unexpected light on her history.

If until now she has been so sparing of her treasures, it is, above all, owing to the nature and special purposes of the researches hitherto undertaken.

The Palestine Exploration Fund has, beyond doubt, rendered immense service to Biblical studies, and accomplished, with rare energy, a grand work with which will remain connected the names of Wilson, Warren, Conder, and Kitchener. Its *Quarterly Statements* published since 1869, and filled with the most interesting information, its admirable maps of Western Palestine, its beautiful volumes of "Memoirs," give brilliant evidence of its efficiency. But its efforts have, until this day, been principally concentrated (and rightly, for one must keep within bounds and proceed methodically) upon the geography, geology, topography, and the descriptive archæology of the country. The searching for antiquities, the forming of archæological collections by means of acquisition, did not enter into its programme ; the few antiquities collected have, so to speak, been accidentally met with.

The time appears to have come for the proposal of another aim. A

portion, and not the least one, of the task has been accomplished with the greatest success. After what has been done we must think of that which remains to be done, and consider whether it would not be advisable to organise a real museum of Palestine, in which could be arranged in methodical series all the fragments of its past that could be picked up, and of which the little collection belonging to the Palestine Exploration Fund would naturally form the nucleus.

It rests with the Palestine Exploration Fund to carry out this programme, by applying to it the resources at its disposal, and the means never grudged by a public who have constantly followed and supported its former undertakings.

I do not pretend to trace here the plan of this institution, which should be founded on the widest basis. I will limit myself to pointing out the general lines that it would, in my opinion, be expedient to follow in order to carry it into execution. The Palestine Museum should consist of a vast building in which would be placed together, not only all the local antiquities, all the monuments which could be obtained, but also reproductions in fac-simile, or casts, of monuments that cannot be displaced or that exist in other museums, plans in relief on a large scale, photographs, stereoscopic views, complete and attractive specimens of the animals, flowers, &c., peculiar to the country, costumes, ethnical types, tools, arms, instruments, geological specimens picturesquely arranged, &c. It would be well to join to these an extensive and animated panorama of the Holy City, and dioramic views of the principal localities and of characteristic scenes of popular life in Palestine, in order to add to this scientific combination an irresistible element of attraction and success. A library, containing all the principal publications relating to the Holy Land, and receiving any fresh ones as they appear, should be annexed to it, and put at the disposal of students ; rooms reserved for popular or learned lectures. In short, in the centre of London should be created a representation, as faithful, varied, and complete as possible, of Palestine, past and present, which would be as a living commentary on the Bible.

It should suffice to cross the threshold of this building in order to have a perfect view of the Holy Land, both instructive and interesting. The charge of entry, fixed at a moderate sum, would be devoted to the fund necessary for the progressive increase of the collections through the medium of agents residing in Palestine or visiting it at close intervals. By the existence alone of such a central institution, native seekers, certain of a ready sale, would be stimulated and multiply discoveries from all parts of the Holy Land. The first funds necessary for commencing might be obtained either by means of a subscription, or else by shares allotted to all those, and they are numerous, who are interested in the progress of Biblical study, and to whom they would secure certain advantages generally reserved to the founders of similar institutions. A sum nearly equal to that which has already been collected and expended by the Palestine Exploration Fund since its foundation would be amply sufficient.

If this project can ever be realised it is surely in England, in a country

so passionately fond of Biblical studies, and which has already made such great and fruitful sacrifices for the exploration of Palestine.

CH. CLERMONT-GANNEAU.

THE ROUTE OF THE EXODUS.

ON the eve of the departure of the Palestine Exploration Expedition from Egypt for the Arabah last year I sent to Major Kitchener a copy of my book, "The Hebrew Migration from Egypt" (Trübner), with a request that he would kindly note some places in the region he was about to visit as illustrative of my view of the route taken by the Israelites on their route from Egypt to the Land of Promise. I was specially anxious to learn certain particulars about the Haj route from Suez to Akabah, at the head of the eastern arm of the Red Sea, and about the region immediately to the east of Petra. The Expedition did not follow the above route, nor was time or opportunity permitted for the examination of the neighbourhood of Petra. Major Kitchener was, however, good enough to send me a list of the stations of the Haj, from Suez to Akabah, and their characteristics in respect to water supply, and after an examination of my views as to the course followed by the Hebrews, wrote to me as follows:—"I think in your book you have described the actual route taken by the Israelites, and I fully believe Mount Hor and Mount Sinai to be one." As, however, my view completely revolutionises all that has for many centuries been generally accepted, respecting not only the track of the Israelites on quitting Egypt, but the locality of Mount Sinai, it may perhaps not be uninteresting to the members of the Palestine Exploration Fund to summarise briefly the principal grounds on which I have based my conclusions.

According to the Scriptural account the following were the stages and the incidents of the journey between the Egyptian frontier and Mount Sinai. The Israelites went three days into the wilderness, and found no water; at their next stage they came to Marah, where the water was bitter. The next point mentioned is Elim, with its wells and palm-trees, where they encamped by the waters of the Red Sea; from Elim they entered the wilderness of Sin, which lay between Elim and Sinai, and whilst there received the quails, the eating of which caused so many deaths that the place was called Kibroth-hat-taavah (Numb. xi, 34). They then reached Rephidim, where there was no water for the people, and where Moses, having gone on before, caused water to flow through the riven rock. In this neighbourhood the Israelites met Jethro, the father-in-law of Moses, and his people, and concluded a league with them (Exod. xviii, 12). Then follows the mention of Mount Sinai, and what occurred there. This account of the route from Egypt to Sinai is perfectly intelligible, and as I show is alone reconcilable with the assumption that the Israelites crossed the Tih by the well-known road to the Gulf of Akabah, and thence pro-

ceeded up the Arabah for some distance and entered the Idumean range by one of the valleys debouching on "the plain."

The time employed in crossing the Tih from Suez to Akabah is six days. During the first three days no water is found, and the traveller then arrives at Nakhel, the half-way house across the desert, where there is good water. The next stage is Abiar Alaina, so named by the earlier travellers, where the water is bitter; the next, the summit of the defile overlooking the Gulf of Akabah; and the final stage Akabah (Elath), known in ancient and modern times for its wells and its palm-trees, and one of the resting-places of the Egyptian Haj on its road to and from Mecca.

It is therefore easy to reconcile the incidents of a journey across the Tih with those related as marking that of the Israelites before reaching Elim. During three days they would seek in vain for water, which does not exclude the presumption that at the end of that time they obtained it; at their next stage they would reach Abiar Alaina, where the water is bitter; and the next place worthy of mention must have been Elath, with its wells and palm-trees. In the Scriptural records it is stated to have been Elim. Elim and Elath are, however, as every Hebraist knows, only different plural forms of El (as Hazarim and Hazeroth, Deut. ii, 23; i, 1, are plurals of Hazer), and have the same meaning, namely, "trees," or "palm-trees." I cannot here give in detail the many reasons, Scriptural, philological, historical, and geographical, for my identification of the Elim of Exodus xv, 27, with the Elath of Deuteronomy ii, 8, and the historical books (1 Kings ix, 26) which preserved its name until converted by the Greeks into Elana, and by the Romans into Ailah.

If the Israelites took the route I have indicated, then it will probably be admitted that Mount Sinai must have been somewhere in the Idumean range. The captives would scarcely have returned to the Tih, and they did not until a much later period march along the east "coast" of Edom. They consequently must have gone northwards up the Arabah.

I then proceed to show that if they took this route, they entered the Idumean range by one of the valleys communicating with Petra, that it was Kadesh in the vicinity of the Mount of God, and that the miraculous supply of water was obtained through the Sik, the marvellous chasm through which a stream enters Petra from the east.

The evidence supplied, not only in the Scriptural records, but elsewhere, in support of the accuracy of these conclusions is overwhelming. It is needless to say that there is not a word to be found in Holy Writ in which any allusion is made to the so-called Sinaitic peninsula.

In the blessing of Moses Sinai is placed in Seir (Deut. xxxiii, 2), and that the mountain range of Seir was in Edom is not disputed. In the song of Deborah (Judges v, 3, 4) the mother of Israel no less unmistakably indicates that to her mind Sinai was in Edom, and was one of the mountains of Seir. Habakuk sings of God coming out of Teman, and the Holy One out of Mount Paran (Hab. iii, 2), which mount is identified in the blessing of Moses with Sinai, whilst Teman is universally admitted to have formed part of Edom. The story of Elījah's journey to the Mount

of God (1 Kings xix) furnishes no great help in determining whether Sinai was in the peninsula or in Edom, but I show by Josephus's paraphrase of the story that in his opinion the prophet directed his steps to Edom. St. Paul beyond all question placed Sinai in Arabia (Gal. iv, 25), and I demonstrate by a careful examination of the earliest opinions held respecting the limits of that country, both by Arabian geographers and others, that it was not until the second century of the Christian era that Ptolemy created a new Arabia, called Arabia Petræa, which he is supposed to have extended to the west of the Arabah, comprising the Tih and the Sinaitic peninsula; but this Arabia was absolutely unknown to St. Paul and his contemporaries, and could not in the necessity of things have been referred to by him when he used the words "Mount Sinai in Arabia." Isstachri, in the tenth century, and Abulfeda at a still later date, declared that Arabia did not extend west of the Arabah, and they would never have sought for Sinai to the west of that boundary. The Tih and the peninsula were regarded in Judæa, until long after the commencement of the Christian era, as portions of Egyptian territory.

From a careful examination of the "Onomasticon," I show that Eusebius and Jerome, though evidently ignorant of the precise mountain to be regarded as Mount Sinai, were of opinion, on the strength of traditions existing in their time, and of beliefs held by their contemporaries, that some of the places which in the Pentateuch must have been in close proximity to the Mount of God were in Idumea. Thus the place where Moses caused the water to flow from the rock at Rephidim they identified with what must be the later Petra. Pharan, which must equally have been in the neighbourhood of Sinai, they declared was three days' journey from Ailah on the *east*; but following the Roman road which led from Ailah through the Wâdy-el-Yitm to the east of the range of Seir, such a journey would take the traveller to a region bordering on Petra. It is, however, clear from the writings of Eusebius and Jerome, and I may also add Josephus, that at the commencement of the Christian era, and at the end of the fourth century, there was no one in Judæa who had a knowledge of the precise locality of Sinai. All that was known of it was that it was in Arabia; but if Josephus, or Eusebius, or Jerome, had known of any mountain which in their time was called Sinai, they would undoubtedly have fixed the locality by stating its distance from some place well known to their contemporaries. For example, Mount Hor, where Aaron died, is unequivocally stated to be in the immediate neighbourhood of Petra.

It appears from the chronicles of the Monk of Chartres, and Albert of Aix, that at the commencement of the twelfth century Baldwin led two expeditions through Idumea. In the first he reached Petra and was there shown the waters which flowed from the rock when struck by the great Hebrew lawgiver, and in the adjoining Mount Hor the King and his companions were led to believe they saw Mount Sinai. In the latter expedition they proceeded as far as Ailah, at the head of the Gulf of Akabah, and were told that it was the Elin with its wells and palm-trees

mentioned in Exodus. Here they received a message from the monks living on Mount Sinai begging them not to ascend the mountain. I show that this mountain could not have been in the Sinaitic peninsula, but must have been the same to which reference is made in the record of the first expedition, as overhanging Petra, upon which was a Monasterium dedicated to Aaron.

I consequently demonstrate that all the evidence at our command, whether supplied by the Scriptures or by other writings, points in one direction alone, and indicates beyond doubt that Sinai was in Edom.

We possess, however, in the Book of Deuteronomy (x, 1-6) absolute proof that Sinai was not only in Edom, but was identical with the mountain where Aaron died, the *Har-ha-har*, "the Mount of Mounts," now known as Mount Hor. I need not say Mount Hor is not a proper name: it is simply Hor-Hor—Mount-Mount.

It is there stated that Moses having descended from "the mountain" with the second set of tables of stone placed them in the Ark. That this mountain was Sinai will not be denied. But immediately afterwards follows an account of the children of Israel setting forth from the walls of the Beni Jaakan to Mosera, and that there Aaron died and was succeeded by Eleazar. But it is undisputed that Aaron died on Mount Hor—the Mount of Mounts, and it is therefore abundantly clear that to the mind of the Deuteronomist—whether Moses or a later writer—the death of Aaron took place on or in the immediate neighbourhood of Mount Sinai. On grounds into which I cannot enter here I identify the Beeroth Beni Jaakan with the Esek and Sitnah of Isaac, and the Massah and Meribah of Exodus' which are to-day represented by two streams rising a few miles to the east of Petra and uniting before they penetrate the Sik. The well from which one of these streams springs bears to-day, as it did in the time of the Crusaders, the name of Ain Mûsa—"the Well of Moses."

Kadesh I identify as Petra, not only on the testimony of Eusebius and Jerome, but on the conclusive evidence furnished by the Targumists and Josephus that Rekam was the ancient Kadesh and the then modern Petra. Of the contiguity of Kadesh to the Mount of God, the Scriptural records leave us no room for doubting.

It will possibly be objected that if Mount Sinai and Mount Hor were identical, it is almost incredible that the people of Judæa should have lost sight of that fact, and that the recollection of Aaron's death on the mountain should have survived the memory of the far more wonderful event recorded as having occurred on the Mount of God.

I meet this objection ("Hebrew Migration," pp. 330-333), as I believe successfully, though I cannot here even summarise my arguments. We must not, however, lose sight of the only too palpable fact that Sinai, wherever situated, to all appearances fell into oblivion after the settlements on the opposite sides of the Jordan. No pilgrimages were made to it, and its recollection alone survived in the poetry of the sacred bards. But if it was in the peninsula this neglect is as surprising and unaccountable as if it was in Edom, and consequently this objection presses with equal weight

against the theories of those who identify Jebel Mûsa and Jebel Serbal with the Mount of God as against mine.

It will also be objected that if my view of the route taken by the Israelites be correct, the wanderings in the desert become still more unintelligible. My reply is, that although a considerable period—forty years—elapsed between the departure from Egypt and the settlement in the Promised Land, there is not the faintest suggestion, either in the Pentateuch or elsewhere in the Scriptures, that the Israelites passed that time in wandering from place to place in the manner popularly assigned to them.

The issue here raised is one not only of historical interest, but of deeply religious importance. If, as the Scriptures teach us, the Israelites were Divinely led to their future home, it is impossible to overrate the mistake, if mistake it be, of alleging that during the long period which elapsed between the departure from Egypt and their arrival in the Land of Promise, they were made to stray from place to place within a region which they could have easily quitted within a week.

According to my construction of the story of the Exodus the Israelites arrived at Mount Sinai—Hor, within a month after quitting Egypt (Numb. xx, 1), having crossed the desert of the Tih probably by Nakhl, and Abiar Alaina (Marah) to Elim—Elath, at the head of the Gulf of Akabah, and thence northwards up the Arabah. They were there hospitably received by the Kenites who occupied the country adjoining Mount Hor (Exod. iii, 1). Some time after their arrival they addressed a request to the King of Edom to be permitted to pass through his territory in order to make their way to the trans-Jordanic region. This request was refused (Numb. xx, 21). Edom came out against Israel “with a high hand,” and the further advance of the Israelites was arrested for a period, the length of which we cannot determine with certainty, and Israel “abode in Kadesh” (Judges xi, 17). Subsequently and probably when the “forty years” were nearly exhausted, despairing of being permitted to pass through Edom, the Israelites re-entered the Arabah from Kadesh (Petra), and having “dwelt long enough upon this mount,” were commanded to “turn” (Deut. i, 6, 7), which they did, and “took” their journey into the wilderness “by the way of the Red Sea” (Deut. ii, 1), and having passed “through the way of the plain” (Arabah) by Elath and Ezion-gaber (Deut. ii, 8), at the head of the Gulf of Akabah, directed their steps northwards by the eastern border of Edom to Moab, and thence across the Arnon into the trans-Jordanic region.

This may appear a very startling version of “the forty years’ wanderings in the desert.” I cannot, however, claim for it the merit of originality. The same story was told much more succinctly nearly three thousand years ago, by one of the Judges of Israel. The authority of Jephthah will hardly be called in question (Judges ii, 16–18).

But it will then be asked, “What becomes of the famous wanderings?” My answer is that the belief in them has arisen through the misconceptions entertained in later ages of the very simple and intelligible language

contained in the Pentateuch. These misconceptions have arisen in part from misunderstanding the original story, by gratuitously assuming that the Israelites spent the forty years in moving from place to place, and in part from mistranslation of the Hebrew words which are supposed to mean "to wander."

Caleb is represented as saying that "Israel wandered in the wilderness" (Josh. xiv, 10), but the verb used, *Hah-lach*, literally means "to walk," and it is so stated in the marginal note in the Authorised Version. The same word is used in Deuteronomy xxiii, 14, "Thy God *walketh* in the midst of thy camp," and by Jephthah when he said, "Israel walked through the wilderness to the Red Sea" (Judges xi, 16). This word is frequently employed in Hebrew to signify a state of continuance, thus resembling the French verb *aller*.

Again in Numbers xiv, 33, the word *Rah-yah* is translated "wander," though the translators admit in the margin that it also means "feed." The passage simply means that the rising generation were compelled to "feed"—that is, to live—forty years in the wilderness, until their disobedient parents had died.

In Numbers xxxii, 13, it is said that God "made them wander in the wilderness forty years," but the word so translated, *Noo-ay*, when used elsewhere does not bear this interpretation, but simply means a change of movement consequent on the non-realisation of the object originally prompting it (2 Sam. xv, 20). It would therefore be applicable to the change of route forced upon the Israelites when they failed to secure a passage through Edom, and after a long delay had to retrace their steps to Elim-Elath, and thus skirt the eastern border of Edom. The word does not mean an objectless moving from place to place, or an unreasoning straying in a region from which the strayers were presumably unable to find their way out.

The Psalmist uses (Ps. cvii, 4, 40) a word, *Tah-yah*, which has been rendered *wander*, but when it is pointed out that Abraham employs the same word when telling Abimelech that God caused him to "*wander*" from his father's house (Gen. xx, 13), it is apparent that it simply means to journey in search of an, as yet, undiscovered home.

Those who quitted Egypt, save the rising generation, never entered the Land of Promise, and as the time necessary for proceeding from that country to the land of Gilead would, under ordinary circumstances, have been but a few weeks, the conception arose in later times that the forty years were passed in "wandering"—that is, in straying—from place to place in the desert. But there was nothing in the records taken with them by the Israelites to the land of their settlement to justify that conclusion. They had passed "forty years" in the *desert*, but so they termed the entire region which intervened between Egypt and their future home, and necessarily including Kadesh with the Mount of God. The greater portion of the time was passed at Kadesh, but this fact (Judges ii, 17) was lost sight of centuries afterwards, and the belief arose that the time passed in the desert was occupied in moving objectlessly about from one place to

another. The demonstration that the Israelites did not "wander" is surely more consonant with a belief in Divine guidance than the common assumption that they acted like men who had lost their way.

It will be seen that the key to the solution of the most interesting and ancient of historical enigmas lies in the identification of Elim, the place of palm-trees, with Elath or Eloth, equally noted for its palm-trees and its wells down to the present day. The Coptic monks who settled in the Sinaitic peninsula in the third and fourth centuries chose to fancy that one of its mountains must have been the Mount of God. There were none to deny the pretensions thus set up, and in the course of centuries they became so firmly established that no one ever dreamt of calling them in question. Hence inquirers into the route taken by the Israelites have always started from the postulate that the released captives must have entered the peninsula ; hence the necessity for placing Elim somewhere on the shore of the Gulf of Suez, though confessedly no place corresponds to it, and hence the final necessity of taking the Israelites from one of the so-called Sinaitic mountains up to the table-land of the Tih, and leaving them there without any attempt to trace their further progress until at some distant period they are found at Mount Hor. Let this entirely unsupported assumption of the Coptic monks be discarded—an assumption which I have shown to be wholly at variance with every allusion to the locality of Sinai in the Biblical records, and with the opinions held on the same subject by Josephus, Eusebius, Jerome, and by the Crusaders—and the story, as told in the Mosaic records, becomes perfectly simple and intelligible. I further demonstrate conclusively that the western region of the Sinaitic peninsula close to the Gulf of Suez was occupied by the Egyptians at the time of the Exodus, and that the battle between the Israelites and the Amalekites recorded in Exodus xvii could not by any possibility have been fought in that region. The Amalekites were to be found in Edom, and in that region at a subsequent period the Israelites sustained a defeat at their hands (Numb. xiv, 45 ; Deut. i), and it was they who barred the route of the Israelites to the Promised Land (Numb. xiii, 2). Josephus constantly identifies the Amalekites with the Edomites.

The stations of the Egyptian Haj between Suez and Akabah, as given by Major Kitchener, correspond with the Biblical account of the journey of the Israelites across the desert to Elim-Elath-Akah :—1st day, En Nawater, no water ; 2nd day, Jebel Hosu, no water ; 3rd day, Nakhl, good water ; 4th day, Abu Muhammed, or Er Reis, bad salt water ; 5th day, Ras en Nakb ; 6th day, Akabah, good water. It will thus be seen that the three days' journey without water would take the Israelites to Nakhl ; the next day's journey to Abu Muhammed, evidently a modern name, which I identify in my book under the name of Abiar or Bir Alaina with Marah and its bitter water, and from thence it was two days' journey to Akabah—the Ailah of the Romans, the Elana of the Greeks, and the Elim-Elath of the Hebrews.

I may add, in conclusion, that it is singularly confirmatory of the accuracy of my conclusion in placing Kibroth-hat-taavah, "the Graves of

Lust," in the Arabah between Elim-Akabah and Mount Hor—Sinai, that in the map of the lower Arabah, prepared under the direction of Major Kitchener, a marsh with the name Taavah is placed about a day's march from the head of the gulf. On the western side of the marsh are the remains of a Bedawin cemetery. It would be curious to ascertain whether the Bedawin selected so strange a place for a burial ground in consequence of any ancient tradition still clinging to it. At all events the designation remains unchanged after 3,000 years—Kibroth-hat-Taavah, "the cemetery of Tavaah."

J. BAKER GREENE.

A PUZZLE IN JOSEPHUS: TWO GADARAS OR ONE?

EVER since I prepared my work on "Galilee in the time of Christ," which first appeared early in 1874, I have felt that there was a difficulty with regard to a certain passage in Josephus, and its solution which I subsequently arrived at may be useful to those who have not reached independently a similar result. These notes might have been published long ago, except that I hesitated to do so on the ground that I did not feel competent to criticise so celebrated an editor of Josephus as Dindorf. The difficulty to which I refer will be best represented by quoting two passages both of which are from the "History of the Jewish War."

1. "Vespasian having arrived before the city of Gadara, carried it on the first assault, having come upon it while it was destitute of an effective force. On entering the town he put to death without distinction all from youth upward, the Romans showing compassion to none of adult age, as well from hatred to the nation as in recollection of the outrages committed against Cestius. The city itself he reduced to ashes, all the hamlets and small towns around sharing its fate." (3 "Wars," vii, 1.)

2. Vespasian "broke up his encampment" at Cesarea-on-the-sea that he might proceed to Jerusalem and finish the war, but deemed it "necessary previously to reduce what remained in his way, that no external impediment might interfere with his operations. Accordingly he marched on Gadara, the capital of Perea, a place of some strength, which he entered on the 4th of the month Dystrus," corresponding to the 24th of February. No battle took place here, for by a preconcerted plan that portion of the inhabitants who were disposed for peace opened the gates secretly and welcomed him to the city, while those who were for war fled, and their pursuit led at last to the engagement before Beth Ennabrin, and to the slaughter on the east bank of the Jordan opposite Jericho. Vespasian merely placed a garrison in Gadara, and withdrew again with a large part of his army to Cesarea-on-the-sea. (4 "Wars," vii, 3, 4.)

It is commonly supposed that the Gadara referred to in these two

passages was one and the same place, namely, the town east of the Jordan well known at present as Um Keis. There are, however, good reasons for supposing that this cannot possibly be true.

It will be noticed that in the first passage, Gadara, which is called a "city," was reduced to ashes, and its inhabitants were slaughtered; the date of this event was the spring of the year A.D. 67.

The date of the event recorded in the second passage was the spring of the year A.D. 68; in fact, there was hardly an interval of twelve months between the two. In this passage Gadara is a strong city, with walls, and with a numerous population that was divided into two powerful factions bitterly opposed to each other.

There is thus a decided contrast between the circumstances of the place as stated in the first passage, when compared with those that are mentioned in the second passage, which leads to the conviction that two distinct places are meant.

By glancing at the events which led up to the taking of Gadara, as mentioned in the first passage quoted, we find that Vespasian, after having collected his forces at Ptolemais early in the spring of the year A.D. 67 (3 "Wars," vii, 1), moved forward with the purpose of invading Galilee (*ibid.*, vi, 2), and, apparently with his entire army, reached the frontiers of that province (*ibid.*, vi, 3). His position can be indicated approximately from the circumstance that a Jewish force encamped at a town called Garis, not far from Sepphoris, fled when they heard that the Romans were approaching and were "on the point of attacking them" (*ibid.*, vi, 3).

Vespasian's march must have been in an easterly or rather in a southeasterly direction from Ptolemais. Going in this direction he reached the frontiers of Galilee (3 "Wars," vi, 3). It was then and there, without any time having intervened, and without any further march having been made, that he carried the city of Gadara by assault (3 "Wars," vii, 1).

Hearing that Josephus and the Jews had rallied in Jotapata, Vespasian ordered a road to be made through the rough country lying between his camp (at Gadara) and that place, when he moved thither his whole force, the time occupied in making the march being an entire day, and, it is necessary to mention, no more than that (3 "Wars," vii, 3, 4).

Vespasian was in an enemy's country, and it was necessary for him to advance with the utmost caution. To have taken his army to Gadara east of the Jordan, would have been to have taken it through the heart of a hostile country several days' march from Ptolemais, his proper base of operations and supplies, past Tarichea, a powerful city of the enemy, and where subsequently to secure it a great battle was fought, and it is unreasonable to suppose that even to strike his foes with terror he would have attempted such a rash move as all this would imply.

When Vespasian captured Gadara east of the Jordan there is, in the record, no hint that the place had been captured by him before.

Neither is there in the record any hint that the place had been rebuilt, or that it had revolted, both of which must have been true had Vespasian captured it twice within the space of twelve months.

The people of the place which Vespasian took were hostile to him, and hence they were destroyed; while in Gadara east of the Jordan there was such a large party in his favour that he was admitted without a struggle.

If Gadara east of the Jordan is meant, Vespasian on his return must have marched his army in one day from this point to Jotapata, a thing which is simply impossible.

We conclude that whatever place may be referred to in the passage quoted from 3 "Wars," vii, 1 it is certain that Gadara, now known as Um Keis, cannot be meant; on the contrary, that place was on or near the frontiers of Galilee at a point east or south-east of Ptolemais, and at a distance of an ordinary day's march from Jotapata, now known as *Jefut*, situated half-way between Ptolemais and Tiberias.

GADARA OR GABARA?

We come now to consider what should be the proper reading in the text of Josephus in 3 "Wars," vii, 1.

In the "Life of Josephus" we find a city in Galilee named Gabara frequently mentioned as playing an important part in the events of those times, but which is never once spoken of in the history of the war; notice must be taken of some of the passages where this name occurs.

Gabara, Tiberias, and Sepphoris are referred to as "the three largest cities in Galilee" (1 "Life," xxv), and that they were so is confirmed by the fact that they were called upon equally to furnish their respective complements of troops (chap. xl). Gabara was friendly to John of Gischala, and joined his party; hence it was inimical to Josephus and desired his destruction (chaps. xxv, xlv).

While Josephus was at Chabolo watching the Romans under Placidus, Jonathan, accompanied by others, arrived from Jerusalem and summoned him to appear before them at Xaloth (chap. xlv). This Josephus refused to do on the plea that he could not leave Chabolo defenceless. Jonathan wrote again and demanded that Josephus come to him at Gobaroth, which is called a "village" (chap. xlv), while he himself, accompanied by his party, goes thence to Japha, Sepphoris, Asochis, and at last reaches Gabara. Meantime Josephus went to Jotapata, "forty furlongs distant" from Chabolo, or from his camp near that place. In his reply to Jonathan, Josephus declines to go either to Gabara or to Gichala, but to any other of the two hundred and four cities and villages of Galilee he was willing to go; and hence it is clear, both from this statement and from his subsequent conduct, that he did not decline to go to Gabaroth.

Having placed guards on the road leading from Gabara to Galilee he repaired to Gabaroth, which he reached in the fifth hour of the day, having left Jotapata in the morning. I give these details respecting distances because I consider them valuable helps in our efforts to identify the localities mentioned (chaps. xlvi, xlvii). In front of Gabaroth, which is again called a "village," was a plain where the party of Josephus were assembled. After some deliberation Josephus determines to advance

“against the deputies,” meaning Jonathan and his friends. The latter heard of his approach, and withdrew to a kind of citadel, where they hoped to entrap Josephus upon his arrival.

From details given in chap. xlviii it is certain that Gabara and Gabaroth were two distinct places, one being always called a “city,” and the other never called a city but a “village”—situated, however, in close proximity to each other, and which have been considered as one and the same place.

Omitting the details of what happened at Gabaroth, Josephus in the end, to avoid a conflict, mounted his horse, and directing his party to follow him, rode to Sogana, distant twenty furlongs from Gabara (chap. li).

We have said enough to show that in the very region where we should expect to find the “city” Gadara mentioned in 3 “Wars,” vii, 1, we find the “city” Gabara brought forward in the record in the most conspicuous manner, and we do not hesitate, therefore, to change the reading in this passage from Gadara to Gabara.

As Gabara, Tiberias, and Sepphoris are mentioned together in chap. xxv, and again in chap. xl, it is probable that the same group is meant in chap. xv, where Josephus says, “I took Sepphoris twice, Tiberias four times, and Gadara once.” The reading Gadara here must be changed to Gabara.

To sum up what I have said it appears—

1. That the place referred to in 3 “Wars,” vii, 1, as Gadara cannot be the place now known as Um Keis ;
2. That the reading in this passage should be Gabara, and not Gadara ;
3. And that Gabara and Gabaroth were two distinct places.

SELAH MERRILL.

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NOTES FROM THE APRIL QUARTERLY STATEMENT.

MR. OLIPHANT’S interesting paper has, unfortunately, suffered by his absence from England, which leads to many misprints remaining uncorrected. Of these the most important are Mukkraka for Mahrakah (“place of burning”), Tsjin for Ijzim, Dahlieh for Dâlieh, and an error of the omission of the ’Ain in the Arabic word Kal’ah. The remains described by Mr. Oliphant are similar to the various Byzantine fragments which occur again and again in the “Memoirs,” but he has been able to confirm in a very remarkable manner my discovery of a synagogue at Semmâka by the recovery of the seven-branched candlestick over a tomb door which I missed in 1873.

I am also glad to be supported by Mr. Tomkins with respect to Kanana. As to the ruin Râbûd to which he refers (p. 58), the suggestion

seems to me very possible ; but Tell 'Arâd is hardly in the hills, as Mr. Tomkins seems to say, being in an open plateau.

As regards Mr. Birch's papers it is not necessary for me to say much. If he attaches any value to the size of Sarum, he should measure its area on the Ordnance Survey map. I may note, however, that Dr. Schliemann in Troja gives us a city of Priam of 40 acres, and a later Ilion of about 100 acres. Surely Troy was a less important place than Jerusalem.

The hypothetical second aqueduct from the Virgin's Fountain to Siloam has left no known traces of its existence. A curious point in Mr. Birch's plan is that he apparently joins it on to an existing channel in such a way as to show that the water must run just the opposite way to that in the real existing water channel, which leads *from* the Pool of Siloam to the gardens in the Kedron.

I believe that the fact which has originated the idea of a second aqueduct is that a short tunnel has been found in the rock just north of the dam which closes the old Pool below the modern Pool of Siloam. This tunnel I have seen and entered. Its lowest part is considerably higher than any part of the Siloam tunnel, and it runs rapidly up hill. If it was ever more than a drain it was probably the end of the surface channels which existed on Ophel in 1872, but which are now destroyed in quarrying. The level precludes the idea that it can have any connection with the Virgin's Fountain.

C. R. C.

NOTES FROM THE JULY *QUARTERLY STATEMENT*.

Prof. Hull's Paper.—I am glad to find the general views suggested in "Tent Work in Palestine," and in my paper on the Exodus (1883), receive confirmation by a skilled geologist. I may note that the level of the sandstone east of the Dead Sea was determined by us in 1882 over a considerable distance, which, together with other observations, will be found noted in my "Memoirs."

Dolmen in Bashan.—This is described in the last *Quarterly Statement* as a large example, but neither in height nor in size of capstone does it at all approach the finest Moabite examples.

Prof. Sayce on Jerusalem.—I had not gathered from the sketch that the Temple-hill was supposed to be occupied by a town in Solomon's time, nor do I know any passage in ancient writings which would support such a theory.

Kadesh.—It should not be forgotten that there are objections which have seemed to many fatal to the identification of Kadesh Barnea at 'Ain Kades, which Dr. Trumbull appears to consider proven. I have read Dr. Clay Trumbull's book carefully ; it contains much valuable information, but as he finds himself obliged to move Mount Hor and Mount Seir

from east to west of the Arabah, it is clear that he sees the difficulty arising from 'Ain Kades being so far west.

Herr Schick's Paper.—In some details this agrees with the views of General Gordon; in others it reproduces a former paper by the same writer. There are several points in the paper which seem to require reconsideration. Why must the Stone of Bohan be "white striped?" A confusion seems here to have occurred. Why does Bueimât mean "door of death" (Bâb el Maut)? According to the Arabs it means "little owls." Why should an ordinary boundary cairn of the Arabs be "the heap of stones the Israelites placed over Achan?" The cairn is called Esh Shemaliyeh, "northern," which has nothing to do with Achan. The idea that Beth Samys, Shemesh, and Som'a are the same place was originated by General Gordon, but contains two errors. First, Beth Samys is well known to be the present Hizmeh, the Hebrew Azmaveth; secondly, Som'a ("the heap," spelt with an 'Ain) has no connection at all with either Shemesh or Samys. There are several unfortunate misprints in this part of the paper.

Why is En Rogel placed at Bir Eyûb? This is not the general belief of students. Why is Lifta "with good reason" identified with Nephtoah? There are many objections to such a view, philological and topographical. Ephron and Ephraim are certainly not the same in Hebrew, the first having a guttural Ain. The name Kubbet Rahil I could never recover at Herr Schick's site. Ikbâla is a Crusading convent, and, as far as I could find, nothing else.

Mr. Birch on Acra.—As regards this paper I have only a few words to say. My statement as to Mr. Fergusson's view regarding Akra was duly verified by reference to the map which accompanies his account of Ancient Jerusalem, published about 1847.

Mr. Birch is, no doubt, aware that many authorities consider that two Akras are intended in various passages, one being the hill of the lower city, the other the Antonia fort; and as Akra is only a Greek term meaning apparently a fortress (as in the Acropolis of Athens), there seems no reason why the Hebrew Baris (Birah) may not be in some cases so translated. The LXX reads Akra for Millo. As regards the tomb of Uzziah, there is more than one difficulty in reconciling the accounts in Kings and Chronicles, but my argument is that the "City of David" was another name for Jerusalem generally. When Ophel came to be inhabited the name may be supposed to have included Ophel, but this is quite a different matter to confining ancient Jerusalem to the insignificant space south of the Temple. Mr. Birch himself quotes passages from the LXX which agree entirely with the supposition that the terms Zion and City of David are synonymous with Jerusalem generally.

As regards the note from the Tosiphta quoted by Mr. Birch, I think it is clear from the context that R. Akiba was not referring to a known fact, but constructing a theory. If bones had remained in the tombs under the city, Jerusalem would have been impure. "Hence it is shown," argues the Rabbi, that some underground passage must have existed whereby the

tombs were cleared. R. Akiba was supporting his unsound theory as to purity by a bold invention as to underground passages, being forced to admit that the Royal Tomb was (as all men knew) inside the city. This kind of argument is not yet extinct, but R. Akiba's passage had no more existence in fact than Mr. Birch's second Siloam aqueduct. As to the long passage from Gibeon, I have only to say that I do not think the authors of the Pascal Chronicle knew more about the Tomb of David than we do. I do not see how Mr. Birch has proved my references to be unverified, although Mr. Fergusson's view as to Akra are not the same in his various books on Jerusalem.

C. R. C.

EMMAUS.

I.

THE identification of Urtâs with Emmaus seems to be accepted in some quarters as "proved beyond cavil or doubt" (*Quarterly Statement*, 1883, p. 62). At the risk of being classed among "cavillers," I venture to give reasons for entirely dissenting from the proposed identification. In *Quarterly Statement*, 1879, p. 105, I endeavoured fairly to summarise the evidence for the several claimants to represent Emmaus. There is given there a quotation from Lightfoot, who proposed to identify Etham with Emmaus, not only anticipating Mrs. Finn's proposal, but giving another, and I think more plausible, support for it than she has done. My objections are—

(1) There is no evidence to show that "the bath" Mrs. Finn writes of is of the age she assumes—that it was old enough, not to say important enough, to give its name to a place known to Luke and Josephus.

(2) The existence of a bath, or baths, in a valley down which flows abundance of water is not, *primâ facie*, a thing so special as to explain the distinctive name of a village. If every place is to be recognised as a possible "Emmaus" where the name "Hammâm" is found, we shall have plenty to choose from. Is this different from the place noted in "Memoirs," iii, p. 94, thus?—"Hummâm Suleimân—an old pool, now filled up, with fine masonry walls, and some pillar shafts lying in it. It is in the valley below Urtâs." "An aqueduct from it is said by the natives to have supplied Birket el Hummâm at Jebel Fureidis." Here are two spots at which the name occurs in this same valley. And see the "Memoirs" *passim*.

(3) Etham has transmitted its name from the days of Rehoboam (2 Chron. xi, 6), and is still known as 'Ain 'Atan. What evidence is there that it ever was "superseded after the days of Solomon by that of 'Paradise?'" (*Quarterly Statement*, 1883, p. 58.) If the evidence of the natives is of value on the point, the name is still "Hummâm Suleimân," and with Urtâs preserves the memory of Solomon's gardens and pools uninterruptedly.

(4) Josephus knew the site of Solomon's gardens (8 "Ant.," vii, 3), and tells us "they were at Etham about 50 furlongs distant from Jerusalem."

He knew also the position of the Roman colony, of which he writes, "it is called Emmaus, and is distant from Jerusalem 60 furlongs" (7 "Bell. Jud.," vi, 6). Clearly he knew nothing of the name Etham having been superseded, and he did not suppose it the same as Emmaus, or he would not have given the two names thus, at different distances from Jerusalem. His position of Emmaus is the same as Luke's, showing it to be correctly given. His position of Etham is also correctly given, as measurement shows.

(5) Manifestly the Emmaus of Josephus and Luke was a well-known place—"a village." Jerome located the Emmaus of Luke at Nicopolis, though surely one who lived so long at Bethlehem would have heard of the name there, had it been known. No traces of villages such as tombs, &c., seem to have been found. Meshullam, who lived so long there apparently, never heard the name as that of a village. Urtâs refers, it is generally agreed, to the old gardens of Solomon, and is not, as, *e.g.*, Kolonieh, of later origin superseding Emmaus; while nothing remains, so far as has yet been shown, to prove that the place ever was other than a garden, with "pools" in it, and that there ever was a change of its name to Emmaus, and then a reversion to its earlier name. Urtâs, Hummâm Suleimân, 'Ain Atan, are against the suggestion, and agree in one ancient tradition.

(6) What position would be selected for a Roman colony, it would be venturesome to attempt to decide. It is not likely that 800 disbanded soldiers would be *very* modest in their claims in a land conquered and depopulated. The little garden of Urtâs would certainly suffice for but few of them. Moreover, Josephus, in the same chapter in which he tells of the planting of the colony at "a place called Emmaus, 60 furlongs from Jerusalem," tells us of the capture of "that citadel which was in Herodium." Herodium is 60 furlongs from Jerusalem; if he meant Herodium in both places why did he not say so, instead of introducing the name and distance from Jerusalem of another "place"—a village too (Luke), not a *walled* citadel?

(7) As regards El Kubeibeh, on the other hand, it is found to be the correct distance from Jerusalem. The Crusaders said they found the name of Emmaus there. They knew of Emmaus Nicopolis, and its acceptance by Eusebius as the Emmaus of Luke, and had no occasion to *invent* the name. The name of a colony clings to the place. Three miles along the Roman road, passing through El Kubeibeh, there is Wâdy el Hūmmâm, and down that valley is Khurbet el Hūmmâm, where they could have planted their holy place had they not found the name where they said they did. Two Roman roads cross just there; while the story of the land from the days of Joshua to that of the Maccabees, demonstrated the value of holding that position—communicating, moreover, as it did, with the sea and the garrison of Cæsarea.

As regards Kurbet el Khamasa, a statement of its claims, to which nothing can be added, is given in "Memoirs," iii, p. 36. Between it and El Kubeibeh the case seems still to lie.

II.

ALL readers of the *Quarterly Statement* must have been interested by the account of Mrs. Finn's researches in the Valley of Urtas (January Number, 1883); but I doubt whether many were convinced by her arguments in favour of identifying that place with Emmaus. As, however, Mr. Mearns (January Number, 1884) refers to a paper of mine (July, 1881) on the same subject, and supposes that I have probably given up my own view and adopted Mrs. Finn's, I shall be much obliged by your allowing me to point out why Mrs. Finn's argument appears to me inconclusive, and to state a little more in detail my reasons for adhering to the opinion that connects St. Luke's Emmaus with Kubeibet, and with the Wâdy Buwai stretching down to Kolonieh.

Mrs. Finn's case rests on a mistaken inference from the words of Josephus about the Galilee Emmaus. He interprets the name to mean, *pro hac viâ*, Hotwells ("Bell," iv, 1, 3). But he certainly does not intend it to be understood that the name Emmaus always has that meaning. The same Hebrew name might easily have different Greek equivalents, and *vice versâ*. Josephus mentions two other places called by the same name, but does not in either case connect the name with Hamath, or Khamath (Hot Spring); and it is certain, as a matter of fact, that in one at least of those places (Nicopolis) there is no trace of there ever having been a hot spring.

This particular question is indeed no new one. Lightfoot long ago pointed out that although the Galilee Emmaus derived its name from its hot springs, the Gospel Emmaus could not do so, because the Arabic, Syriac, and Persian translations of St. Luke begin the word with an **ע**, and the Talmudists write the Nicopolis Emmaus **אמאוס**. He concludes: "There were at Emmaus [Nicopolis] noted waters, but we can hardly suppose that they were warm, if we consider the usual writing of the word among the Talmudists."¹ And I may add that this argument is strengthened by the recollection that the Jerusalem Talmud, and probably the Mishna, were written at Tiberias, by men therefore well acquainted with the hot springs of Hamath.²

There is therefore no ground for the assumption with which Mrs. Finn sets out, that the interpretation given by Josephus to the Galilee Emmaus is to be extended, or has any application to any other Emmaus. In that particular instance Ammaus represented **חמית**. In a second case it represented, as we have seen, **אמאוס**. In a third it may with equal propriety, and probably does, represent **המוצה**.

But how does Mrs. Finn apply her inference, assuming it to be correct, that every Emmaus must be a Hamath? She knows that there are no hot springs at Urtas, or at any suitable distance from Jerusalem.

¹ Lightfoot, ii, p. 371; *cf. ibid.*, p. 42.

² *Ibid.*, p. 72.

She does not suggest (as Mr. Mearns does) that in a volcanic country hot springs may have changed to cold. But noting that the Arabic Hammâm stands for artificial hot baths, as well as for hot springs, she argues that Emmaus may have been employed with a like latitude; so she asked herself, "Were any baths to be found at a suitable distance?" If so, there would be Emmaus. The copious fountain in the Urtas Valley attracted her attention, as being sufficient to supply baths. The recollection of once visible traces of baths still existed in the neighbourhood: search is made: remains of extensive and luxurious baths are brought to light, dating very probably from the days of Herod the Great: and Mrs. Finn concludes that she has found Emmaus.

But with all deference I submit that just as every Emmaus was not a Hamath, or Hot Spring, so every discovery of Hammâm, or Baths, is not the discovery of an Emmaus. That there were Hammâm at Urtas Mrs. Finn has discovered as a veritable and interesting fact; and, as a matter of course, *these Hammâm were called Hammâm*. But that the village itself, or the district, was ever known by the name of Emmaus, or even of Hammâm, Mrs. Finn has not advanced a fragment of evidence. Nay, she has not shown that any village or district whatever has ever been called Hammâm because artificial baths were erected there. Of course baths cannot but be called baths, but every place that has baths is not necessarily called Bath. There is nothing whatever in the fact that baths were found at Urtas, and that they were suspected to exist there and were called (as they could not but be) Hammâm, to prove that the *valley* or *village* ever bore the name of Hammâm, or of Emmaus.

Mrs. Finn endeavours to fortify her claim for Urtas as the Emmaus colony of Josephus, by suggesting that it was chosen by Vespasian with a view to keeping a watch over the surviving remnant of Jewish fanaticism at the fortress of Masada. But the colonisation referred to was in no sense what she calls it, *military*. It was a *grant of land* to 800 *disbanded* veterans, for their residence and possession (*εἰς κατοίκησιν*).

Thus the reasoning in favour of Urtas crumbles away step by step. While against the theory there are one or two matters certainly worthy of consideration, which have not been noticed.

1. Is it probable that the splendid and "Royal" baths which Mrs. Finn describes, and which, according to her theory, had given a new name to the valley, a name under which the valley was familiarly known in the days of St. Luke and of Josephus, should have been so completely obliterated and the new name so entirely forgotten by the days of St. Jerome—that he, living close by, should have entirely overlooked it, and should have ascribed to Nicopolis, as he did, the honour of being St. Luke's Emmaus?

2. Is it probable that Josephus, alluding to a place so notable, and so near *Bethlehem*, should have called it "a district 60 furlongs from Jerusalem?" And if he did so, is it probable that St. Luke also, who in the second chapter of his history had illumined the famous city of David with a new and imperishable glory, should in his last chapter have spoken of a village within a mile and a half of that city, as "60 furlongs

from Jerusalem," and not in the far more natural way, as "a village near Bethlehem?" No writer would speak of Clewer as a "village some twenty miles from London," when he could give the far more pointed description "close to Windsor."

As I observe the fragile nature of Mrs. Finn's arguments, and these *à priori* improbabilities in her theory, I feel that, while all must have thanked her for her valuable contribution to the discussion (and none more so than myself, who recollect a very pleasant evening spent at her house at Jerusalem some thirty years ago), the careful searchers for Emmaus will not subscribe to the title of her paper as "*Emmaus Identified.*"

Let me now state my reasons for believing that the district (χωρίον) of Emmaus which Josephus says was given by Vespasian to 800 disbanded veterans, lay along the valley that has Kolonieh at its southern extremity, and that the village (κώμη) spoken of by St. Luke was near the head of that valley and reaching on to Kubeibeh.

In Joshua xviii, 26, we read of a certain Mozah; but in Hebrew it reads, with the article, הַמִּצָּה (Ham-Môtsah), and it is represented in the LXX by Ἀμώσα (in Codex A., Ἀμώσα), and in the Vulgate by Amôsa. This Môtsah is named in the connection with Mispah, Rekem, and Chephira, or Haccepheirah. And in the locality where the acknowledged sites of these places are found there is still existing a ruin called Khan Beit Mizza; and the interchange of Yod and Vav is so frequent that there is good ground for thinking that Mizza or Mitsa represents the ancient Mozeh, Môtsah, or Ham-Môtsah. In other words, this ruin, Mizza, represents more or less closely a place called in the LXX Ἀμώσα, in the Vulgate Amôsa.

Is anything further known about Mozeh? The Talmud speaks of a certain מִצָּה, spelt as Joshua spells it. It gave its name to a valley "near Jerusalem" and "below Jerusalem," to which the Jews resorted on the first day of the Feast of Tabernacles to provide themselves with the two willow branches which each worshipper was expected to carry on that occasion, and for some reason or other it bore the name of Kolonieh. (Smith's "Dic. of Bib., S.V.," Mozah, Cespari, § 191; Lightfoot, vol. i, 976.) But the ruin Beit Mizza, which, as we have seen, probably represents the ancient Amosa, is but a short distance from the only place anywhere near Jerusalem which now bears the name of Kolonieh. There is therefore good reason for regarding Beit Mizza as representing the Talmudic Mozah, and if so, the Mozah of Joshua and of the Talmud are the same. In confirmation of this it may be observed that Furst (without reference to the History) derives the name from מִצָּה to suck, and interprets it "*the place of reeds.*" Certainly willow might well be looked for in "the place of reeds."

We have now then arrived at a further step in our argument. We have found that the Amôsa of Joshua became a colony. No one can fail, however, to see how near the name Ἀμώσα, or Amôsa, comes to Ἀμμαους, or Ammaus. And when we read in Josephus that Vespasian gave a *district*

(χωρίον) to 800 disbanded veterans for their possession and residence (εἰς κατοίκησιν), and when he further gives this district the name of Ἀμμαους, it is impossible to avoid the conjecture that Ἀμμαους is more or less closely connected with the ancient Ἀμώσα, or Motzah, and with the Kolonieh of the Talmud.

The difficulty now presents itself that Josephus says Ammaus is 60 furlongs from Jerusalem, whereas Kolonieh is about 36. But a little consideration suggests that as Josephus speaks of a *district* (χωρίον) to be divided among 800 men for a permanent residence, one end of this district may have abutted on the great Roman road to Joppa (at Kolonieh), and the other end may have been three or four miles further from Jerusalem, and altogether away from that road. And while the lower end of the valley would form the nucleus of any growing population, and would soon develop into a new town, and swallow up all recollection of a former state of things, the original village, which gave its name perhaps to the valley, may have been, *when the colony was first placed there*, at the distance named by Josephus. Few things are more observable than such a shifting of population and names, when villages and hamlets are changed into towns by some wave of circumstance.

Once more: If Môtsah, Amôsa, Ammaus, was the name of a district, the ruin Beit Mizza may be the southernmost trace of the old name, and the original village (κώμη) may have been, in the time of St. Luke, at the head of the valley, and extending beyond it. Here the Crusading tradition comes to our aid. For though that tradition may have no authority as such, yet the fact that it would have been more natural for the Crusaders to place Emmaus at Kuriah Enab on the Jaffa road, and the fact that the tradition harmonises with and helps to reconcile the other data, give it some real weight. According to this tradition Kubeibeh is the village Emmaus. It may have been the furthest extremity of the village; if so, the two disciples on that famous Easter Day would descend into "the valley near Jerusalem" just at the point over which Beit Mizza now stands, would pursue its course northward and westward, and as they reached its head would be at the end, or near the end, of their memorable journey.

One conclusion is indisputable, that no other location of St. Luke's Emmaus could by any possibility combine so many rays of light as converge upon the Wâdy Buwai from Joshua, the Talmud, Josephus, existing names, and Crusading tradition.

R. F. HUTCHINSON.

THE SITE OF ZION.

ANOTHER perusal of Captain Conder's article on this subject has led me to think that he has altogether misapprehended my views about the size and position of the pre-exilic Jerusalem, and has further overlooked the necessary inferences to be drawn from the Siloam Inscription. At the

risk, therefore, of threshing the old corn over again, I write a few lines, which will, at any rate, I hope, make my own meaning clear.

The Siloam tunnel is cut through the south-eastern hill of modern Jerusalem, the so-called Ophel, and it is towards the lower or south-western end of it that the famous inscription is engraved. I have endeavoured to show that the tunnel is the same as that referred to by Isaiah (viii, 6), in the reign of Ahaz, and that the conduit made by Hezekiah was the second tunnel, which led from the Upper Pool of Siloam, or the Lower Gihon, to the Lower Pool of Siloam. Other scholars believe that the Siloam tunnel itself is the one that was made by Hezekiah. Whether they or I are right is of no consequence for the present argument: in either case we now know the exact position of the hill through which Hezekiah's aqueduct was excavated. It is the so-called Ophel, or south-eastern hill.

Now we have two accounts in the Bible of the construction of this aqueduct. One is in 2 Kings xx, 20, which does not state where it was precisely that it was made; the other is in 2 Chron. xxxii, 30, which tells us that Hezekiah "directed the waters of the upper Gihon—or Virgin's Spring—to the west side of the city of David." Consequently, the tunnel which starts from the eastern slope of the south-eastern hill, and ends on its western slope, must run through the site on which the city of David stood, and this site must be the south-eastern hill. I see no escape from this conclusion. Furthermore, we have the explicit statement in 2 Samuel v, 7, that the city of David was built on Zion. The hill of Zion, therefore, was the south-eastern hill.

So much for Captain Conder's theory of the position of Zion. The Siloam Inscription has virtually settled the dispute. It also settles the question as to whether the hill of Zion extended across the deep Tyropœon valley—a rather remarkable feat one would have imagined for a single hill. Hezekiah's conduit ended on the western side of the city of David, while the two Pools of Siloam are on the western slope of the south-eastern hill; accordingly, the city of David, and the hill on which it stood, could not have extended across the gorge to the west of it. The Tyropœon Valley, therefore, must be the valley of the sons of Hinnom, into which the western gates of Zion opened.

When this conclusion is reached, it follows, as I have pointed out, that Ophel is only the northern portion of the south-eastern hill. In my former paper I blundered over the account given by the chronicler (2 Chron. xxxiii, 14) of the wall built by Manasseh, owing to my not perceiving that the Gihon he mentions was the Lower Gihon, or Pool of Siloam. Manasseh began his wall "outside the city of David," and to the west of the Pool of Siloam, but also somewhat to the south of it, at the point where the "gorge" of the sons of Hinnom met the *nakhal*, or valley of the Kidron. From this point it ran northwards as far as the fish-gate, where it turned to the east and "compassed about Ophel." I suspect that "the broad wall" spoken of by Nehemiah (iii, 8; xii, 38) formed part of it.

Pre-exilic Jerusalem, accordingly, consisted of two hills only: the south-

eastern, or Zion, the northern “excrecence” of which was termed Ophel—a name which implies an “excrecence” on another hill, and not the whole hill itself—and Mount Moriah, on which the Jebusite city stood. Until it was levelled by Simon the Hasmonean, the highest point of Zion dominated Moriah, which will explain why the Jebusite redoubt, or protecting fortress, was built here, and also why David erected here his palace and barracks. From the time of Solomon onwards the south-eastern part of Moriah was occupied by the palace and temple where the court officials and guards as well as the priests lived; the rest of Moriah continued to be the seat of the Jebusites and foreign merchants who filled the bazaars on the north and west.

Now it is clear to me that Captain Conder, with his mind full of the Temple area of the Herodian epoch, has never realised that it was this amalgamation of the old Jebusite town and its Jewish suburb which I meant by pre-exilic Jerusalem. Otherwise he would never have imagined that I confined “the capital of Syria in David’s time” to an area of only 15 acres. He himself tells us (in his “Handbook to the Bible”) that the building space on Moriah amounted to 35 acres, and this has to be added to the 15 acres before we have an approximate measure of the size of Solomon’s city. My impression is that the Jewish suburb itself, though we are told only 15 acres in extent, was no smaller than the Hebron which was for seven years the capital of David. The Jerusalem of David’s later years would not be much inferior in size to the rival capital of Ammon.

Captain Conder thinks that his views as to the size of pre-exilic Jerusalem are supported by the Book of Nehemiah, where it is said (vii, 4) that “the city was large and great, but the people were few therein.” Unfortunately, however, he has not read on to the next chapter. Had he done so he would have seen what Nehemiah’s statement really means. Here (viii, 1) we learn that not only the inhabitants of Jerusalem itself, but also of the country round about, “gathered themselves together as one man into the square that was before the water-gate,” and there listened to Ezra, while he read the Law. It was no wonder, therefore, that the city seemed “large and great” to them. Captain Conder has forgotten the infinite capacities of Orientals for packing themselves together in a small space: had he slept with the fellahin of Palestine as often as I have done, I think he would have understood how it is managed.

A. H. SAYCE.

“AS THOU COMEST UNTO ZOAR.”

EVERY new discovery in Bible lands tends to throw new light on the Bible text; and every fresh illumination of the Bible text in the light of later Biblical research is almost sure to give added meaning, as well as added clearness, to both text and context. There is always a positive

gain in finding out just what was originally declared in the sacred Scriptures, however the recent disclosure may damage or destroy the venerable interpretation of centuries. A fresh illustration of this truth is furnished in the light thrown on various passages in the Pentateuch, by the now better understanding of the prominence attaching to the Great Wall of Egypt in the days of the Hebrew Exodus.

Take, for example, that passage in Genesis xiii, 10, which pictures the Jordan Valley, as it was in the days of Abraham and Lot: "And Lot lifted up his eyes, and beheld all the plain of Jordan, that it was well watered everywhere, before the Lord destroyed Sodom and Gomorrah, even as the garden of the Lord, like the land of Egypt, as thou comest unto Zoar." Why "Zoar," of the Jordan Valley region, should here be named in conjunction with "the land of Egypt," has long been a puzzle to the Commentators. A favourite mode of solving the difficulty has been by re-shaping the passage, so as to connect the approach to "Zoar" with "Sodom and Gomorrah" (see, *e.g.*, Vatablus, A. Lapide, Bochart, Poole, Houbigaut, Bush, *et al.*); but that is only a suggestion of what *might have been* a diluted meaning of the passage.

The Syriac version reads "Zoan" [of Lower Egypt] for "Zoar." That would make the sense clearer, if only the change could be justified. Modern discoveries in Egypt have, however, brought out an ancient name of a locality in that land, which comes nearer to "Zoar" than "Zoan;" namely: "Zar," or "Zar" (or Tar, or Tor, as it would be literally, since there is no "z" in the Egyptian). Already, several scholars have proposed the reading of "Zor" for "Zoar," in the passage referred to; but this leaves still unsettled the questions: Where was Zor in Egypt? and Why should Zor have such mention in the description of the Jordan Valley? It is to those questions that I now essay an answer.

Zor, or Zar, or Zal (in the plural Zaru or Zalu), was a designation, not of a city or town, but of the border-land of Eastern Lower Egypt, which of old was shielded by the Great Wall, stretching across that desert frontier from the Mediterranean to the Gulf of Suez. The word itself signifies the "strong place," the "fortified place," or, as it might be rendered, the "walled land." Brugsch, who has done so much in disclosing the history of ancient Egypt, says of the meaning of this word (although, by the way, he has been misled, by some of its applications, into the belief that its use was at times limited to a single city of the border region, instead of applying uniformly to the border region as a whole): "Zar . . . possesses the same signification as its Coptic derivation (ⲗⲟⲗ, ⲗⲟⲗⲉ, ⲗⲁⲗ, ⲗⲁⲗⲓ, ⲗⲁⲗⲉ, ⲗⲁⲗⲉ), 'brave, strong, strength, a fortified place.' . . . It therefore follows that a country called Zar must signify a 'country fortified by forts for its defence.'" (See Brugsch's "Dict. Geog.," p. 997.)

References to this region Zor are frequent in the papyri, and on the sculptured monuments of ancient Egypt, all going to show its location

within the Great Wall, and its population as including the foreign residents of Egypt ; such as the Hebrews in their land of "Goshen," and the Shasoo, or Bed'ween, in their border camping-ground, the "Succoth." The Great Wall itself is often called the "Khetamoo of Zar," the "Fortifications of the Strong Land." The region just westward of the Great Wall is designated on the list of Nomes at Philæ, as *Ta-m-Zaru*, the "Land of Zaru," or the "Land of the Fortifications." The Egyptian official in charge of that region is called *Mer-Khet-Zal*, "Superintendent of the Fortress of Zal ;" and again, *Her-petoo*, "Head of the Foreigners." From this root Zor it is probable there comes Mazor as a designation of Lower Egypt, and again Mitzraim, the Two Egypts, Upper and Lower.

Zor was the garden land of Egypt. "The best of the land" was there in the days of Joseph (Gen. xlvii, 6), and so before and after. A graphic picture of it in the nineteenth dynasty, not far from the period of the Exodus, is given in an ancient Egyptian letter-writer's description of the treasures and attractive surroundings of one of its chief cities. The "Letter of Panbesa," as translated by Goodwin, is to be found in the "Records of the Past" (Vol. VI, pp. 11-16) ; but I quote from the freer and more pictorial rendering of Brugsch ("Hist. of Egypt," II, 100-102) : "Nothing can compare with it in the Theban land and soil [in Upper Egypt]. . . . It is pleasant to live in. Its fields are full of good things, and life passes in constant plenty and abundance. Its canals are rich in fish, its lakes swarm with birds, its meadows are green with vegetables, there is no end of the lentils ; melons with a taste like honey grow in the irrigated fields. Its barns are full of wheat and durra, and reach as high as heaven. Onions and sesame are in the enclosures, and the apple-tree blooms. The vine, the almond-tree, and the fig-tree grow in the gardens. . . . Plenty and abundance are perpetual in it. He rejoices who has settled there."

Here was a "garden of the Lord," an earthly paradise, in the eyes of those who were familiar with it. Abraham and Lot had been within its borders. The self-exiled Hebrews could never forget it as their old home. When they were out in the dreary wastes of the Sinaitic peninsula, their hearts went back after its luxurious abundance, and their lustful cry was : "We remember the fish, which we did eat in Egypt [in the land of Zor] freely ; the cucumbers, and the melons, and the leeks, and the onions, and the garlic ; but now our soul is dried away [we are famishing] : there is nothing at all, beside this manna, before our eyes [no other food to be seen]." The pictures of Zor are alike, whether sketched by Egyptian or by Hebrew pens.

Now if, as we may well suppose, the Book of Genesis was written by Moses (with the aid of whatsoever documents, from the days of Abraham or long earlier, were available to him) during the period of the wanderings, is it not every way natural to find him comparing the rich and tropical fertility of the lower Jordan Valley, which the Israelites did not yet know from personal observation, with the paradise of Zor in Lower Egypt, which was so familiar to them ? What more effective comparison could he have chosen ?

There are frequent glimpses in the Book of Genesis of the primary application of its ethnical teachings to those for whom it was originally prepared. This reference to Lot's choice would seem to be one of these. Moses is picturing Abraham and Lot on the bleak and rugged hillsides of Judah, looking down into the fertile valley of the Jordan, with its tempting display of unfading bloom and beauty. In making vivid his portraiture to the Israelites, his description is as though he had said, "That scene before the eyes of Lot was a rare one. The Jordan Valley is even now a lovely region. You may be tempted to think of it as only a slight improvement on these Negeb wâdies southward from it, with their scanty vegetation and their partial water supply; but it is quite another land from this, and in the days of Lot, before any portion of it was laid waste by the destruction of the Cities of the Plain, that valley was like the place of places in all the world of your knowledge. It was as well watered everywhere, and as fertile in consequence, as that earthly paradise which was your old home in Lower Egypt. It stretched out before the eyes of Lot, as the Egyptian Delta stretches out before those who enter Zor, through the desert gateways of the Great Wall, from the eastward."

That was a comparison which every Hebrew who had come out of Egypt could recognise and appreciate. And when it was added that, under those circumstances, "Lot chose him all the plain of Jordan," while Abraham moved Negebward, and was afterwards a dweller "between Kadesh and Shur," between the border limits of Canaan and Egypt, many of those longing Hebrews must have felt, that Lot showed more worldly wisdom than Abraham in his choosing. With this understanding of their ancestral history, the Israelites were prepared to consider more intelligently the recorded consequences of the choice of ease-loving Lot; as over against the choice of patient and trustful Abraham, with its assured results to his countless children in the faith.

The difference, in the Hebrew, between the words Zor (צֹר) and Zo'ar (צוֹעַר) is that of a single letter (ע). The Rev. Henry George Tomkins (whose recently expressed desire for light on the location of Zor has immediately prompted me to this article) even goes so far as to say, that "the Hebrew word *exactly* suits" the Egyptian name; but, possibly, he had in mind the fact that an *Egyptian* writer, not having an exact equivalent of the Hebrew 'ayn, would have written Zo'ar the same as Zor. A *Hebrew* writer, however, might have observed the distinction, had he chosen to do so. It is certainly fairer to suppose that a later copyist, more familiar with Zo'ar in the Jordan Valley than with Zor in Lower Egypt, erred in a change of the letter accordingly, than it would be to suppose that the whole passage was originally written so clumsily as to require its reconstruction, in order to make its sense plain, as so many commentators have argued.

A second reference to this locality, with the same error in transcription, would seem to be found in Deuteronomy xxxiv, 3, where the Land of Promise is described as it stretched out before the eyes of Moses

from the heights of Pisgah. "And the south, and the plain of the valley of Jericho, the city of palm-trees, unto Zoar," is the present reading. The apparent prominence here given to the small city of Zoar as a noteworthy boundary limit, is clearly not in keeping with the other statements of the inspired description; but when "Zor," or the eastern border of Lower Egypt, is recognised in this "Zoar," the consistency is manifest. "Moses went up from the plains of Moab unto the mountain of Nebo, to the top of Pisgah, that is over against Jericho. And the Lord showed him all the land of Gilead unto Dan." That took in Israel's territory east of the Jordan, at the right hand of Moses, as he stood, and marked the northerly limits of the Land on the western side. "And all Naphtali, and the land of Ephraim and Manassah." That swept downward through Galilee and Samaria. "And all the land of Judah unto the utmost sea." That included the territory of Judah and of the Philistines, in front of Moses, from the Dead Sea westerly to the Mediterranean. "And the south." That was the Negeb, from Beersheba to Kadesh-barnea, at his left hand. "And the plain of the valley of Jericho the city of palm-trees, unto Zoar;" or, more accurately, "And the circle of the valley of Jericho, the city of palm-trees, unto "Zor." That marked a sweep from the beautiful Jordan Valley, at his feet, far away south-westerly to the borders of Lower Egypt, the limits of the Land of Promise in that direction. Is not the reasonableness of this rendering obvious?

It may be mentioned just here, that a chief difficulty in the way of identifying Zoar in its suggested site near the southern end of the Dead Sea, has been the fact that that point was not visible to Abraham and Lot on the one side of the Jordan, nor to Moses on the other side, from their summits of observation severally. But if Zoar is found to be not mentioned in either instance, its site can be decided apart from any such supposed difficulty.

And is it not fair to suggest, also, that "Zor" was meant instead of "Zoan" in the references, in Psalm lxviii, 12, 43, to the marvels wrought in Lower Egypt? The Ten Plagues were not confined to the city of Zoan, nor to the immediate suburbs of any one city. Their sweep was peculiarly "the field of Zor," the region westward from the Great Wall of Zor—as the Hebrew Psalmist would view it. It would certainly seem a very natural way of recalling, from Palestine, that series of miracles in the Egyptian Delta, to say of God's wonder-working in behalf of His ancient people:—

"Marvellous things did He
In the sight of their fathers,
In the Land of Egypt,
In the Field of Zor."

Brugsch is clearly not justified in claiming that he finds in an ancient papyrus the very phrase "'sochet Zoan," the 'field of Zoan,' as an equivalent of the phrase of the Psalmist, "sadeh Zoan;" as will be seen

by an examination of the hieroglyphs which he cites in support of that claim (see his "Geog. Dict.," p. 992). To make his point, he arbitrarily translates the quite general determinative of the three upright reeds into the special word *sochet* (*sekhet*) "a field," and then adds the proposition. In fact, while he does not find the phrase "field of Zoan" in the inscriptions, Brugsch does find there the phrase "field of Zaru," or "field of Zor" (see "Geog. Dict.," p. 993), as clearly applicable to the region of the Eastern Delta.

This whole inquiry gives another illustration of the value of Biblical geography as an aid to Biblical exegesis.

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THE SILOAM INSCRIPTION.

FROM the labours of German scholars, and especially Dr. Guthe and Professor A. H. Sayce, we infer that the text of the inscription is now as fairly translated and settled as it ever will be. My present note has reference only to the statement in the fifth line, and its use in aiding us in the settlement of the value of the Jewish cubit in British inches. Professor Sayce, quoting from Dr. Guthe's article in the "Zeitschrift der Deutschen," &c., xxxvi, 3, 4, gives the following translation of the fifth line of the text, as now settled ;—

"And there flowed the waters *from the spring to the pool* for a thousand two hundred cubits."

All former translations of the text have given us 1,000 cubits, but the latest are unanimous in making the number 1,200 cubits. I propose in this short note to again call attention to the value of the Jewish cubit as tested by this revised text of the inscription. It will afford us a good opportunity of arriving at some general result.

THEORETICAL VALUE OF THE CUBIT.

In former communications I have advocated a cubit of $\sqrt{\pi} \times 10 = 17.724$ inches. But I have been making extensive researches in relation to this question, and have arrived at definite results. The cubit-rod of the ancient world, as seen embodied in the nilometer at Elephantine, in the measurements of the Great Pyramid, in the many cubit-rods, and in measurements given in papyri and elsewhere, was the well-known radius of the circle expressed in seconds of arc taken as inches, and reduced

$\frac{1}{10,000}$ part = 20.62648 inches, or the same factor as we use in our estimate of the radius of the earth's orbit to obtain the sun's distance
 $= \frac{206264.8}{10,000} = 20.62648$ inches. This radius was the ancient measuring

rod of the universe, and, with a movable decimal point, became the common measuring rod of the ancient world in all matters pertaining to civil, scientific, and commercial affairs. But this cubit-rod consisted of two spans and a palm, or seven palms.

The Jews used a similar cubit-rod, with a similar division of the scale into spans, palms, and digits. But the Jewish cubit-rod was estimated as a cubit and a handbreadth; for the cubit consisted of two spans = 6 palms = 24 digits. So that the Jewish cubit-rod was one palm or handbreadth *more* than a cubit. The cubit is thus described :

“These are the measures of the altar, . . . its border on its margin about was *one span*.”—Ezek. xliii, 13.

“The border about it was *half a cubit*.”—Verse 17.

The border is “*one span*” in verse 13, and “*half a cubit*” in verse 17; therefore, 1 span = half a cubit. The Jewish cubit was 2 spans, but the cubit-rod was 1 cubit + 1 handbreadth = 2 spans + 1 palm. For the same prophet Ezekiel says :—

“A cubit [cubit-rule or rod] is a cubit and a handbreadth.”—Ezek. xliii, 13.

“In the man’s hand a measuring reed of 6 cubits [as measured by the cubit-rule or rod] by the cubit and a handbreadth.”—Ezek. xl, 5.

If the cubit-rod is 7 palms and the Jewish cubit 6 palms, then the cubit can only be six-sevenths of the length of the rod = 17·6798 British inches. And this will be the value of the cubit used by the excavators of this Siloam tunnel. Let us apply this value to the 1,200 cubits of the inscription, and thereby obtain a test of the entire length of the tunnel “from the spring to the pool.” Taking different values of a cubit we have the following results :—

1,200 × 25	inches	=	2,500	feet
1,200 × 21	„	=	2,100	„
1,200 × 18	„	=	1,800	„
1,200 × 17·68	„	=	1,768	„
1,200 × 16	„	=	1,600	„

THE TEST.

We must not overlook the fact plainly stated in the fifth line of the inscription, that the 1,200 cubits include the entire length of the tunnel “from the spring to the pool.” The cross passage of the Virgin’s Pool = 50·8 feet must be included in this length, for the measurement is evidently taken from the spring itself. Indeed, may it not be true, that the Siloam tunnel originally reached to the spring itself, and that the cross passage of 50·8 feet, leading to the passage above the Virgin’s

Fount, is a more modern excavation? This entire length from the masonry of the spring to the Siloam Pool is about 1,758 feet.

Captain Warren	...	...	1,708·0 + 50·8 = 1,758·8
Captain Conder	...	...	1,706·8 + 50·8 = 1,757·6
Dr. Robinson	...	...	... .. = 1,758

Captain Conder says: "Robinson's measurement includes in his 1,758 feet that portion of the cross passage which leads from the Siloam tunnel to the *back* of the Virgin's Pool, and which measures 50·8 feet by the chain." (*Quarterly Statement*, April, 1882, p. 122.) The above three measurements are taken from the same paragraph. But they all begin with the "back" of the masonry of the Virgin's Spring, some feet distant from the actual spring itself. The excavator who made the inscription probably never saw any masonry around the spring, neither should we allow it to interfere with our measurement "from the spring to the pool." The spring is fully 10 feet from the back masonry, where the above measurements began. The true length would therefore be about 1,768 feet "from spring to pool." This is the exact length given by the value of our cubit:

$$1,200 \times 17\cdot6798 \text{ inches} = 1,767\cdot98 \text{ feet.}$$

The accuracy of any value given to a cubit is always best seen when the number of cubits are large, for trifling errors are then multiplied into impossible values.

S. BESWICK.

Strathroy, Ontario, Canada,
November, 1883.

NOTE ON KADESH BARNEA.

In the *Quarterly Statement* for July there is an extract from a contribution to the "Sunday School Times" by Dr. H. Clay Trumbull, in which he refers to the inability of the recent Expedition of the Palestine Exploration Society to visit 'Ayn Qadees ('Ain Kadeis), the site identified by the Rev. John Rolands as Kadesh Barnea. Perhaps it may be desirable that I should offer a short explanation on this matter in anticipation of the much fuller account which will appear in the narrative of the Expedition shortly to be published.

Dr. Trumbull is correct in saying that the discovery of Kadesh Barnea was one of the objects to be kept in view by our party, but the question was, where was it to be found? It would have been manifestly impossible for us to go into the Badiet et Tih on a roving expedition in search of this or any other site, unless we had had unlimited time and means, both of men and money, at our disposal. Some of us thought that perhaps the

Springs of 'Ain Abu Werideh, at the western side of the Wâdy el Arabah, which we visited, might be the desired site of Kadesh, and plausible reasons might be adduced for this view ; but, for myself, I am disposed to accept the identification advocated by Dr. Trumbull with great ability in his recent work in favour of 'Ain Kadeis. This spot has already been visited, and its position marked on the maps,¹ such as that of the Rev. F. W. Holland ;² but it lies a long way off the line of our survey, and to have attempted to reach it under the circumstances in which we were placed, would have seriously risked the success of the main objects of our Expedition, namely, the topographical and geological surveys of the great Valley of the Arabah, and of its bordering hills on either side.

Nothing would have induced our Alowin Arabs to deviate from our line of march, which, as at first arranged with Mohammed Ibn Jhad, was to take us towards Gaza, by forced marches, from a point in the Arabah Valley one day's journey north of Jebel Haroun. This course, which we only agreed to with the greatest reluctance, was afterwards altered by his brother Ali, to that which we actually took down to the shores of the Salt Sea, and which enabled us to complete in its entirety the examination of the whole valley. The account of this change of plan will be found in the forthcoming narrative ; when it will be seen how close was the risk we ran of leaving the survey of the Arabah Valley in a mutilated and incomplete condition owing to the fears, real or pretended, of our Arab escort. No one has ever carried out similar work with greater zeal and labour than did Major Kitchener and his assistant, Mr. Armstrong, and if any one could have reached 'Ain Kadeis while traversing the Arabah Valley, they would have done so ; but I feel sure they will concur with me in saying, that to have wandered away into the Tih country in search of 'Ain Kadeis would have endangered the success of the whole survey, even had it been practicable.

In conclusion, allow me to say, that after having carefully read and considered Dr. Trumbull's arguments in his work "Kadesh Barnea," I am quite disposed to agree with him as regards this site ; but I cannot go so far as to accept another mountain in the vicinity of 'Ain Kadeis for "Mount Hor," in favour of whose identity as Aaron's Tomb there is strong circumstantial, as well as traditional, evidence. I may have more to say at another time on this point.

Dublin, 24th July, 1884.

EDWARD HULL.

¹ Such as Smith and Grove's Ancient Atlas (J. Murray).

² *Quarterly Statement* for January, 1884, p. 9, with sketch of the Wâdy Kadeis.

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